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THE
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GARDENER'S MAGAZINE,
AND
REGISTER

OF
USEFUL DISCOVERIES AND IMPROVEMENTS IN HORTICULTURE
AND RURAL AFFAIRS.



CONDUCTED
By C. M. HOVEY AND P. B. HOVEY, JR.

BOSTON:
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PREFACE.

IN the Second Volume of the American Gardener's Magazine, an additional quantity of information will be found, for which we refer the reader to the table of contents. For this we are indebted to the continued kindness of our correspondents: our own experience as conductors has also enabled us to add more interest to the work.

In this Volume, agreeably to our intentions as stated at the close of the first, we have commenced giving plans of green-houses of various sizes: two have already appeared, from which designs, we have the gratification to learn, one or two have already been built, and others contemplated for erection the ensuing season. Other plans will be forthcoming in the next and succeeding Volumes, which will finally embrace the most beautiful structures in this vicinity. We have it also in our power to say, that, if we are enabled, by an increasing circulation, ground plans of some of the best arranged gardens will also appear in the third Volume. The method of heating by hot water, as detailed in connexion with the plans of the green-houses, and the method invented by Mr. Hogg, in this Volume, will be a sufficient guide to those who are erecting stoves or green-houses, in fitting up such apparatuses.

Of the various papers in the second Volume, which we may recommend as particularly interesting, are those on the cultivation of Strawberries, on the employment of Vases in garden scenery, on the cultivation of some of the Cacti, on the pink and carnation, and the remarks on the genus *Oxalis*. Our own articles on the forcing of the Cucumber, on growing Peaches in pots, the Calendar of plants, and the remarks on the Pæony, will, we hope, be of some value to the practical as well as the amateur gardener. The paper on the classification and arrangement of Peas, with their numerous synonymes, taken from a foreign work, is of great value.

Among the improvements we may mention the indication of the generic and specific names of plants, as whether classic, aboriginal, commemorative, or composed. Though this may be anticipating a more general knowledge of Botany, we believe they will be found to render the names of plants more familiar. We have also adopted what we think a decided improvement in the index: instead of a general one, we have given a list of all the plants mentioned in this Volume, with, in most instances, their synonymes corrected; from which a reference can be made with great facility. For this improvement, we are indebted, in part, to the 11th Volume of Loudon's Magazine.

In addition to the above improvements in this Volume, in the next will occasionally appear an article, headed *Pomological Notices*: these notices will contain accounts of all the new varieties of fruits introduced, more particularly of the fine kinds of pears, raised by the venerable and celebrated Professor Van Mons, of Belgium. Those varieties which already exist in our gardens, under different names, which may be noticed, will have their synonymes carefully and correctly given. To aid us in the perfection of this article, we shall be assisted by several eminent pomologists. Notices of all new vegetables, worthy of cultivation, will also appear. The Floricultural notices will, as heretofore, embrace every thing new and interesting.

With the close of this Volume, Mr. P. B. Hovey, jr., retires from the editorial department. On this account, however, our Magazine will not be rendered less interesting: he will continue to assist by frequent contributions. With the same zeal in the pursuit of horticulture which has heretofore animated us, we shall endeavor to make the Magazine what it has ever been our desire to, a periodical worthy of the support of all amateurs and lovers of gardening. With the increasing taste for the science, which we are vain enough to believe our Magazine has been eminently useful in spreading, we anticipate a corresponding increase in its circulation: our efforts will be directed to the diffusion of such information as will continue to create a love of horticulture and botany. To our friends who have so liberally contributed to its pages, we again offer our warmest thanks.

C. M. H.,
P. B. H., JR.

Boston, November 18th, 1836.

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CORRECTIONS.

- All the botanical names of plants enumerated in this volume which are misspelt, wrongly accented, or the indication of the generic or specific names incorrectly given, are corrected in the index: consequently those names which do not agree with those in the index, are errors. The others are as follows:—
- In p. 8, line 7 from the bottom, for "50," read "40."
- In p. 11, line 10 from the top, for "exhale," read "inhale."
- In p. 36, line 15 from the top, for "fall," read "full."
- In p. 41, line 4 from the bottom, for "love," read "lore."
- In p. 42, line 18 from the top, after "that," insert a period.
- In p. 46, lines 15 and 20 from the top, for "tubes," read "tubers."
- In p. 165, line 15 from the bottom, for "Epiphægus," read "Epiphégus;" line 3 from the bottom, for "φηγὸς," read "φηγος;" line 1 from the bottom, for "φαγὸς," read "φαγίς."
- In p. 166, line 12 from the top, *dele* "plant."
- In p. 178, line 12 from the top, after "Amateur," add "garden."
- In p. 231, line 14 from the bottom, for "nearest," read "newest;" line 13 from the bottom, for "Sanicaria," read "Saxicaria."
- In p. 232, line 7 from the top, for "Le Leuer," read "Le Sener."
- In p. 348, line 9 from the top, for "arton," read "Arrow."
- In p. 397, line 28 from the bottom, for "Harrisburgh," read "Hamburgh."
- In p. 399, line 7 from the bottom, for "below," read "above."
- In p. 421, line from the top, for "Cosar," read "Cæsar."
- In p. 421, line 17 from the top, for "two hundred thousand," read "sixty-five thousand."
- In p. 424, line 2 from the top, for "the," read "this."
- In p. 434, line 12 from the bottom, for "102," read "202."

THE
AMERICAN
GARDENER'S MAGAZINE.
JANUARY, 1836.

ORIGINAL COMMUNICATIONS.

ART. I. *Some Account of a Green-house erected the past Summer in the Garden of Mr. S. Sweetser, Cambridgeport ; accompanied with Engravings illustrating the same, and the method of Heating by Hot Water.* By the CONDUCTORS.

AGREEABLY to our intentions, it is with much pleasure that we now present to our readers an account, accompanied with a description and engravings, of a neat, beautiful, and very convenient green-house erected by Mr. Sweetser in his garden the past summer, and which has been finished but a few weeks, and the plants just moved into their places for the season. To his kindness in communicating to us, thus early, the information which is contained in this article, we are greatly indebted ; and we have no doubt our readers will be equally so with ourselves. We are confident that this house will be found one of the most complete of the kind that has ever been erected in our vicinity. It is just the size that any person would wish who has but a few hours to devote to the cultivation of flowers and plants ; and the cost of the erection is so trifling, compared with what is generally estimated by those who are unacquainted with gardening, and have but little information on the subject, that we are certain it will serve as a model to build by for every lover of horticulture who is desirous of having attached to his garden or dwelling, that most truly desirable of modern additions, through our long and dreary winters,—a green-house.

In the construction of green-houses, hot-houses, graperies, &c., there is yet much information wanted ; from this want,

many errors have been committed, especially when the erection of such has been entrusted to persons who have no more knowledge of building, than what is necessary for all the common purposes of joinery. Thus, it can easily be conceived why green-houses are so seldom suited to the wants and convenience of the owner ; for it may almost be said to be impossible for an individual who has no information respecting the habits of plants, their want of light, heat, air, &c., to erect a house which shall combine all the advantages of one properly planned and finally constructed, with a single eye to the health of the plants, the economical employment of labor, and the use of fuel. The consumption of fuel, in particular, is one of the most important things in the arrangement of houses ; and until it can be procured at a cheaper rate than at present, it should be the first consideration of the builder to study its economical use. The labor of keeping up the heat in houses is another subject of consequence, both as respects economy and health ; no person who keeps a gardener, would wish him to employ all his time in looking after the fires, when it should be spent in attending to the plants and to the appearance of the house ; nor would he wish to endanger his health, by keeping him up half, and in some instances, the whole of a cold night, watching the furnaces and supplying fuel. To those individuals who possess green-houses for the sole pleasure of having them under their own management, this would at once be a strong inducement to forego the delight and gratification to be thus derived ; and it is, and always should be, the first thing to guard against any such errors in building, as will obviate all these difficulties.

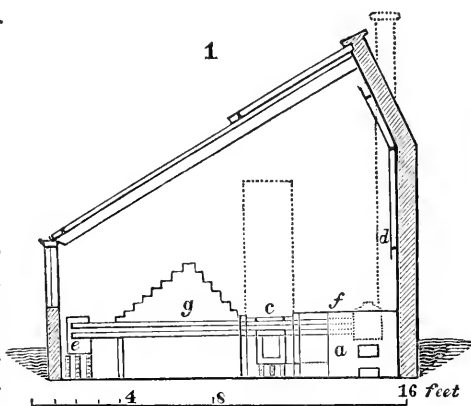
The numerous structures, lately erected in this vicinity, for the cultivation of flowers and fruits, collected from all quarters of the globe, from climates both temperate and tropical, has tended much to improve the beauty and convenience of such buildings. Indeed, the splendid specimens at one or two places, are, we venture to say, equal to any thing of the kind constructed by the celebrated garden architects of our transatlantic neighbors. But these were not done without much deliberation, and without consulting all the works which would throw any information upon the subject ; all the most approved published plans were overlooked, and those parts selected out and formed into a whole as a model for one, which should have all their advantages, and still contend against the rigors and severity of our northern clime, unknown in that of England. English authors have often misled our horticulturists ; we often adopt their examples without reflecting that the temperature of our winters and those of England are entirely different ; or at least,

without reflecting that there is more difference than we at first imagine. But the information which is daily increasing upon this subject, will soon lead to a more judicious construction of such edifices.

The heating of such structures by hot water is an important feature in their management. In fact, without this system is adopted, we do not believe a house, whatever its dimensions may be, can be left with safety during the night; the variation of the temperature in our long winter nights is often so great, that, frequently when it can hardly be supposed that a fire is requisite at night, before sunrise the thermometer has fallen below zero; in such instances, unless fuel is supplied to the common brick flue all night, the plants will be in danger of being frozen; if, however, the hot water system is adopted, the house will be found nearly at the same temperature in the morning that it was left the evening previous. So great are its merits, and so superior to any other method do we believe it to be, that no hot-house, green-house, or grapery, will be erected hereafter, but what will be heated by hot water. But we proceed to give the following details of the house erected by Mr. Sweetser, and having done this, several facts in relation to the hot water system, which have fallen under his observation, will be added.

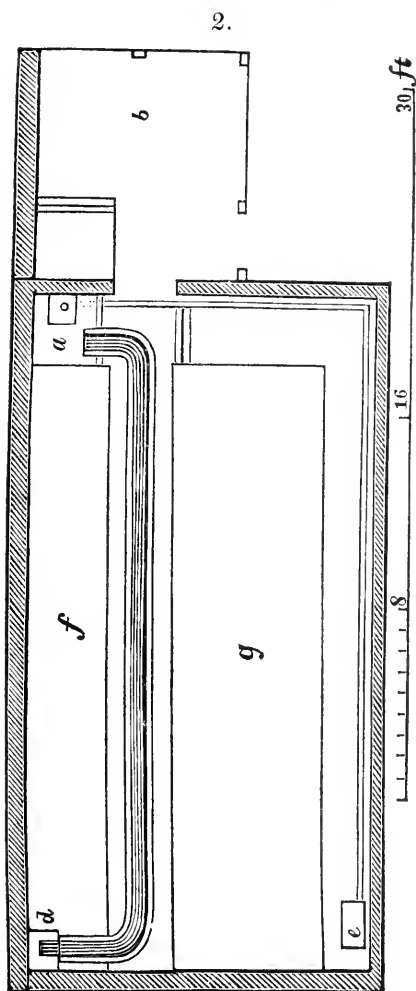
The house (*figs. 1 and 2*), is thirty feet long and sixteen feet in width, measuring from the outside; and fourteen feet and a half wide inside, measuring from the front to back.

The furnace, or head of the flue (*a*), is three feet from front to back, two and a half wide, and three deep; the door into which the fuel is introduced, opens into an end shed (*b*, in the ground plan), and is ten inches by thirteen. The flue from the furnace runs under the centre walk (*c*),



the length of the house, and is carried into the chimney at the opposite corner inside (*d*). The hot water pipes proceed from the boiler to the corner of the house, and across the front, to the reservoir at the other end (*e*). The flue is built

with the bricks flatwise to the distance of six feet from the furnace; they are then laid edgewise. The back border (f) is four feet four inches wide, and is raised to a level with the walk. The stage (g) contains twelve shelves,



seven in front and five on the side next the centre walk; this walk (c) is two and a half feet in width, twelve inches in the middle being open work, that the heat which escapes from the flue may ascend more freely into the house, and also to allow of the passing off of any water which may be spilt in watering the plants. The end shed (b) is ten feet long and ten feet wide. A window is made in the front, which gives sufficient light for all the purposes of potting, kindling fires, &c. The house is built wholly of wood; the back and ends are made with common inch boards placed eight inches apart; between is filled in perfectly dry tan, rammed down very solid; this is necessary, for if it were allowed to settle, a cavity would be left at the top for the admission of cold air. Below the front sashes, the wall is built of four inch plank. The rafters are made of two and a

half inch plank, and are ten inches deep; to the sides of each are fastened strips of inch boards, which are about half the depth of the rafter, for the sashes to rest and slide upon. The top of the rafters are covered with a coping four inches wide, to prevent water from entering the house. The sill for the front sashes is two inch plank; but the front

plate is made of timber, eight inches by four, and has a gutter, to take off the water from the roof, grooved in it.

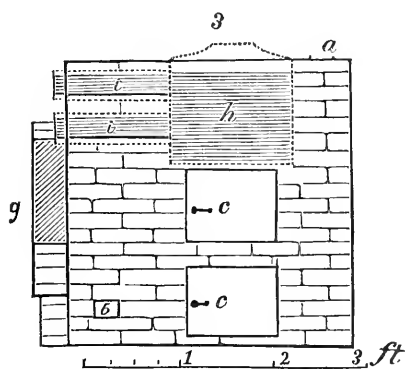
The dimensions of the roof sashes are as follows:—lower ones, nine feet by three and a half; upper ones, six by three and a half; front, two and a half by three and a half. The glass made use of is seven inches by five; five rows of lights in each sash. The laps are about an eighth of an inch; but this may be varied at the option of the builder, either more or less; they should be well fitted, and the work done thoroughly by a first rate glazier, or much cold will blow in through our long winter nights, and cause the consumption of much more fuel. Care should also be taken that the crowning part of the glass is put downwards, that the water may be carried off in the centre of the lights, and not be allowed to get under the putty. The door which opens into the green-house is two feet seven inches wide and six feet high. The walk is two feet six inches wide; twelve inches in the centre being lattice work, which, besides the advantages before mentioned, has an exceedingly neat appearance. The front stage is four feet two inches wide, and contains twelve shelves; the highest being two feet and a half from the level of the walk. This will hold many plants; over the hot water pipes, which run close to the wall, is a shelf eight inches wide, and made on a level with the sill of the front sashes. The back border is filled up with coarse sand, to allow the water to pass off freely; on this are placed all the large and fine specimens of plants of all kinds, and their appearance is highly beautiful, and the effect much more striking, especially upon entering the door, than when they are set upon stages. If any of the plants are very tall, the pots should be sunk in the border. On the back wall is a trellis, as seen in the section, on which may be trained any climbing plants, such as *passifloras* of different species and varieties, *Multiflora* roses, *Lophospérmum*, &c. Over the furnace and boiler a small stage is built, on which are kept the *Cactææ*, *Crassulacææ*, and other of the tribes which like a dry and warm atmosphere, and which, in green-houses in general, scarcely retain their life through the winter. This stage may be of any shape, but in this house it is made with a square back to fit in close; the front forming a quarter of a circle, which looks extremely neat, and covers the brick work.

The end shed is built of common boards the back being filled with tan in the same manner as the back and ends of the house. The roof is not carried up quite so high as that of the house, but is of the same pitch, front and back. In front of the furnace door is a pit, four feet square, to admit of the easy introduction of fuel, &c.; across the opposite end of the shed is a bench for potting plants; underneath is

placed the different kinds of soils, generally used for the purpose.

These are the particulars as respects the building of the house, as taken from exact measurement, and drawn to a scale in the above plans. The expense of erecting the same will be given at the close of this article. The next and most important thing is the method of heating by hot water; and, as we wish to be perfectly understood, we have had engravings made, which we shall here present; and from them, with the annexed description, we believe any person can have a similar apparatus constructed.

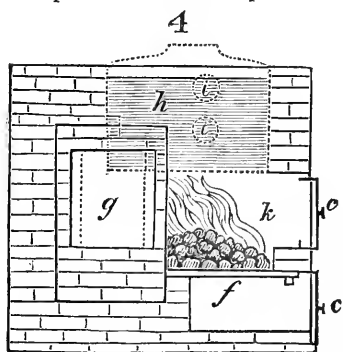
The size of the furnace, or head of the flue (*figs. 3 and 4*), has been previously given. It is built of eight inch brick work; on the side next the walk and the back towards the border



is a hot air chamber, five inches wide. All the heat is thus saved and conducted into the house through an aperture (*a*), on the surface, at the back. The cool air drawing in at a similar aperture (*b*) opening into the shed, and becoming heated as it passes out at the former one (*a*). This chamber is formed by merely building up one course of brick on two sides of the furnace, at the

distance of four inches, and covering the cavity, with the exception of the apertures. The doors (*c c*) are those

used for common boilers. The grate (*f*) is moveable, being bars of inch iron resting on a cross bar in front, and upon the brick work at the back, as seen in the side section (*fig. 4*).



The flue (*g*) is built like any common one, and connects with the side of the furnace. The boiler (*h*) is sixteen inches wide, twenty inches long, and fifteen deep, measuring from the under side of the rim, and contains about sixteen gallons

of water. The pipes (*i i*) are four inches in diameter, and both them, the boiler and the reservoir, are made of copper. The reservoir, which is only shown in the section of the

house (*fig. 1, e*), is twelve inches wide, twenty-four long and eighteen deep, the pipes being fitted to it in precisely the same manner as into the boiler. The height of the water is represented by the light lines in the plans; it should never be filled to within, at least, half an inch of the surface of the upper pipe. The furnace around the fire (*k*) should be built with fire brick, as the heat is so intense as soon to destroy common masonry.

Over the furnace, in the end of the green-house, is left an open place, about two feet high, and two feet wide, to admit of easy access to the boiler, from the shed, without entering the house, for the purpose of turning water into the boiler, whenever occasion requires. This place is made close, when not wanted open, by a door of just the size, which opens into the shed by hinges on the door side, and is fastened open by a hook. This is generally kept closed; but, if the green-house is too warm, air may be easily admitted by leaving it open. The grate is cleared of all ashes by drawing out the single bars, when it falls through, and the bars returned to their places.

The consumption of fuel is very small; anthracite or hard coal is used. The fire, in common winter weather (Therm. 16° to 24°), is lighted about four o'clock in the afternoon, and about a peck of coal put into the furnace; this lasts until about nine o'clock in the evening, when a half peck more is added. In very severe weather the consumption is greater, a peck, instead of half a peck, being required at nine o'clock. The water should not be allowed to boil, as steam would be generated, and the water wasted. If a very hot fire is kept under the boiler, it will require to have water added more frequently. When there has not been any fire in the furnace for several days, and it is apprehended the night will be intensely cold, it should be lighted earlier than four o'clock. In general, however, the fire should not be allowed to go out as long as there is any heat wanted. The water will then retain its warmth, and less fuel be required in the end, as the furnace will only need occasional replenishing. The atmosphere almost invariably is found the same in the morning as it was left the previous evening, not varying in the greatest, more than two or three degrees. The usual temperature at which it is kept is from 42° to 45° . The front sashes have shutters, which we believe, has not been mentioned above, in describing the house; these are extremely useful; and if there were shutters also to slide over the lower roof sashes, it would be a great saving of fuel.

The expense of building this green-house cannot be exactly given; but the actual cost will not exceed the total amount of the following items.

For the erection of frame complete, boarding, tan for filling up, and making roof and front sashes	\$250 00	
500 feet of crown glass, 7 by 5—\$9	45 00	
Glazing roof and front sashes,	30 00	
Building frame of end shed, filling back with tan, curb in front of furnace, benches for potting, &c.	30 00	
Painting house inside, walls, trellis, walk, &c.	16 67	
Painting and drawing sashes	5 00	
	<hr/>	376 67

The following items are for inside work.

Erecting stage, fitting up shelves in front, trellis on the back wall, curb to back border and other work	30 00	
Lattice work for centre walk	15 00	
	<hr/>	45 00

Expense of heating the house.

Building furnace, flue, chimney, and stand for reservoir (3000 brick used)	38 00	
Furnace and ash-hole doors and grate . .	5 00	
Copper boiler and reservoir, weighing 70 lbs. at 40 cents the lb.	28 00	
70 feet of four inch copper pipe (1 lb. to the foot), making and fitting up, at 50 cents per foot (or lb.)	28 00	
	<hr/>	99 00
		<hr/>
		\$520 67

This amount, Mr. Sweetser states, will not vary but a few dollars from the actual cost ; it will not exceed this ; if anything, it will fall short. At another opportunity, we hope to present our readers with some facts relative to the temperature, the consumption of fuel, &c., throughout the winter.

ART. II. *Descriptive Notice of the Osage Orange (Maclura aurantiaca).* By T. S. P.

THE following extract respecting the *Maclura*, is from Loudon's *Encyclopedia of Plants*; "A spreading deciduous tree, about twenty or thirty feet high, with a yellow axillary berry, the size of an orange, nearly as succulent, and said to be as agreeable when fully ripe."

The fruit is beautiful and tempting to the eye, but disagreeable to the taste. It is, properly speaking, a compound berry, or berry-like aggregate, growing on very short peduncles, and attaining, at maturity, a considerable size. It is globular in its form, with a warty surface; of a pale yellow cast, and rather fragrant than otherwise. A tree growing in my garden, yielded this year about one hundred and fifty, many of which weighed eighteen or nineteen ounces.

The berries are formed at the axils of the leaves, and when they are as large as sycamore buttons, which, in that state, they exceedingly resemble, the pistillate organs become fully developed. These organs are filiform, like the silk of the Indian corn, about an inch in length, and very numerous. The seeds, however, are generally abortive, owing, probably, to the partial fructification by the pollen of the staminate plant.

The branches of the tree are armed with a number of rigid spines,—a circumstance which has induced many persons to suppose it may be advantageously used for hedges. It is extremely hardy, flourishes in almost any tolerably fertile soil; and with sufficient clipping, it is highly probable it may become valuable for that purpose. It would certainly be very ornamental.

It has also been suggested that the *Maclura* might be usefully employed in the arts. The whole tree, including the fruit, abounds in a thick milky fluid, which might doubtless be converted into caoutchouc, as it readily assumes a viscid and elastic consistence when exposed to the air. This gum, however, is obtained in such immense quantities from South America, and at so cheap a rate, that it may not be profitable to cultivate any of our plants for the purpose of obtaining it.

Yours,

T. S. P.

Beaverdam, Virginia, Nov., 1835.

It will be recollected that we noticed this plant in our last (I, p. 460), stating that a memoir had been presented to the French institute, in which it was asserted that it would be a good substitute for the *Morus multicaulis*, the foliage of which is so celebrated for food for the silkworm. By the above excellent communication, from our correspondent,

it will be perceived that it may yet become very useful in other respects, and may be extensively employed in various arts. It is a tree, as yet, but little known, and having a very limited cultivation. We are not certain, but we think there are few, if any (except at some of the nurseries) this side of Philadelphia, where it was introduced by Nuttall, the first discoverer and namer of the plant (*Genera, &c., of North American Plants*, II, p. 223, 1818). It is a beautiful growing tree, and when loaded with its golden fruit, it presents a most magnificent object. When we first saw it, in the fall of 1831, at the Messrs. Landreth's, we were particularly struck with its appearance; it was then full of fruit, but they had not begun to assume their yellow tinge, which they do not, in the Middle States, except in extremely favorable seasons.

Much has been said in respect to it, in Loudon's Magazine, particularly in regard to that very important question, whether it is a monœcious or a diœcious plant; that is, whether the staminate (male) and pistillate (female) blossoms are produced in distinct flowers on the same plant; or, whether the staminate blossoms are produced entirely on one plant, and the pistillate ones on another. In *Loudon's Encyclopedia of Plants*, quoted above by our correspondent, it is registered in Monœcia Tetrándria Lindley; and in the *Introduction to the Natural System of Botany*, by the latter author, Artocárpeæ, to which order it is referred, is defined as containing "flowers monœcious." But Mr. Nuttall, in his *Genera, &c.*, has placed it in Diœcia Tetrándria. From all the information, however, which has been collected together, it appears that Mr. Nuttall was incorrect. J. D., in Loudon's Magazine for June, in a paper on diœcious plants, asks the following question: "Are the sexes of *Maclura aurantiaca* diœcious, or monœcious?" and then adduces proof to the latter. Further information is yet wanted, and if any of our friends, who are well acquainted with the tree, and have examined the flowers, can communicate anything which will throw more knowledge upon the subject, we shall be happy to receive it. Through our Magazine it will reach those who are very desirous of obtaining such facts as will tend to settle this important question. We have no doubt ourselves, but it belongs to the monœcious plants. In the above communication, mention is made of but one tree, and this has borne fruit, which it would not have done, had it been diœcious. In the Messrs. Landreth's nursery we saw but one tree, and this a large specimen full of fruit, standing isolated from any other tree whatever. The Messrs. Prince have stated, (*Gard. Mag.* II, p. 350,) that the "male plant is [1826] not only not in Europe, but not in any botanic establishment in this country, except our own." This we infer must have been an error caused by supposing the plants were diœcious, they not having, probably, at that time, produced fruit. It has not yet fruited in England.

All the Artocárpeæ to which this belongs, abound in a milky fluid, in most of the genera, resembling caoutchouc. In this order is placed the Upas tree of Java, of which so much has been said, and which contains the most deadly poison. In it also are found those harmless plants, the mulberry and the fig, the latter so well known as an article of luxury. It is one of the singular instances in which deleterious and wholesome plants are found in the same order. We think it very probable that, belonging to the same order of *Morus*, it will be found a good substitute where that cannot be grown. It is of rapid growth and perfectly hardy in the Middle States; but whether it will stand our northern winters we are not certain, as we do not know of any trees in this quarter. It should, however, be introduced, if for no other purpose than for ornament, into every garden where handsome and showy indigenous trees and shrubs are collected together. Loaded with fruit somewhat resembling an orange, the effect of a few trees, planted either

in the pleasure-ground or garden, would be very imposing. Unpalatable as the fruit is, there would be no danger of its being touched ; while any of our fine fruit trees, in the same situation, might be subject to continual depredations.—*Conds.*

ART. III. *On the Management of Plants in Rooms.* By ROBERT MURRAY, Gardener to the Hon. Theodore Lyman, Jr., Waltham.

GENTLEMEN,

AMIDST the rigors of stern winter, how delightful it is to exhale the balmy odors of a few select plants ; even the lovely blush of the expanded rose, when the whole face of nature is clad in a mantle of snow, might entice the most careless admirers of Flora to supply their parlors with these delightful harbingers of pleasure through the winter months. But in all the numbers of your valuable Magazine, I have never observed any hints on the management of greenhouse plants kept in rooms or parlors. In order to supply this deficiency, I have, in as brief a manner as possible, endeavored to give a few remarks, which may not, perhaps, be unimportant. You are aware that it would require too much room to enter into a minute detail, and enumerate a great number of species and varieties, with the modes of propagation ; I shall, therefore, confine my remarks to those kinds most generally grown in such situations.

In the first place, I shall treat on the proper soils, and the potting or shifting of the plants ;—secondly, how to arrange the plants on the stages or in the windows ;—thirdly, on the watering of the plants ;—fourthly and lastly, how to destroy insects that may annoy them.

I shall now begin by considering the plants procured from a friend, or purchased from the nurseryman or seedsman, and take the first part of the subject, namely, soils and potting. I may here merely mention that all the soft wooded kinds will do very well in a good rich loam with a quantity of vegetable mould or decayed tree leaves (I would strongly recommend that a quantity of vegetable mould be kept in store, as it will suit almost every variety of plant) ; the same may be said of myrtles, oranges, lemons, *Áucuba japónica*, *Verbena tryphylla* [*Álòysia citriodòra*], &c., but not quite so light ; the most part of the shrubby, or hard wood-

ed kinds, such as ericas or heaths, diosmas, &c., like a peat soil, with a good quantity of white sand well mixed ; two or three inches of the surface of the soil from an old oak wood will answer the purpose very well. There are some persons that think there is a stated time for potting or shifting plants. This is an error. There never ought to be any particular time ; it ought to depend a great deal on the state of health and growth. Some plants may require shifting twice or thrice a year ; others but once ; the best way to ascertain whether a plant should be shifted, is to turn it carefully out of the pot, and examine if the roots are matted about the sides and bottom of the ball, and if such is the case, the plants evidently require fresh potting. But it is not always necessary to put plants into pots or tubs larger than those they were taken from ; if that were always done, they would soon get out of all bounds. The ball may, with propriety, be reduced, perhaps, to half or third its former bulk. In preparing pots, be sure to put a handful of potshreds, or bricks broken up small, in the bottom of each ; then put as much soil as will raise the surface of the ball to within about an inch of the brim ; then place the plant exactly in the centre, and with a small wedge-shaped stick, fill in the soil between the ball and the sides of the pot, being careful that no cavity is left ; the soil should be filled to within half an inch of the brim of a middle sized pot ; if a very large pot, an inch should be left for water ; by no means heap the pot with soil, as is too often done, especially by the ladies. After the plants are potted, they should have a gentle watering, and be kept from the mid-day sun for two or three days.

Arranging the plants on the stages or in the windows.—When a table is allotted for the plants, let it be placed as near the window as possible ; place the smallest ones next to the glass, and so on with the second and third sizes, finishing with the tallest back, so that they may all have an equal share of the sun and air ;—by no means place them the reverse of the mode just mentioned. But some of your fair readers may observe, that the beauty of the plants will be hidden from their visitors, especially those who prefer show to the health of their plants. This inconvenience may be avoided by having small stages made to fit the windows, placing them on castors, that they may be turned so as to view the plants, or drawn back in a very hot sunshine. I should think there would be no lover of plants but would go to a trifling expense in order to have them look well. Observe to give air every day, except in very severe frosts.

The watering of the plants.—The following question has been often put to me,—How often should plants be watered ? In answer to the question, I would observe, that there never ought

to be any stated time, but when they are in want of it ; and that want they will generally make known themselves, by the drooping of their leaves ; in hot weather, they should be looked over at least once, if not twice, a day, and at these times, only to water those that are in want of it. I am of the belief, that one half of parlor plants are killed or sickened either by withholding water, or making too frequent use of it ; by the former, the plants will soon begin to lose their leaves, and by the latter, the soil will be kept saturated, and the roots become rotten, which must cause the death of the plants. There is another evil, practised by the ladies, which I will mention ; that is, having the plants in saucers, and watering them at the roots ; this is a practice that cannot be too strongly deprecated. The water ought always to be poured on the surface, so that the fibres may be all equally refreshed. I am aware that there are many persons who will not agree with me in deprecating the use of saucers, on account of the carpet and furniture ; but let me observe that I have no objection to the use of saucers, provided they do not allow water to stand in them. Such plants, however, as the *Agapanthus umbellatus* and *Calla æthiópica*, &c., can never be injured, but, on the contrary, will be benefited by standing in water ; and, at times, let the plants be taken out of doors and sprinkled over head, which greatly refreshes them, and takes the dust from the leaves. If any of the *Cactææ* tribe are kept through the winter, they should not be watered ; but after they begin to show their flower buds, they should have a very liberal supply ; on no account keep them always damp.

Destroying insects that annoy plants.—The chief enemy is the green fly, which can be easily destroyed by placing the plants in a close room and fumigating them with tobacco smoke. Let the room be well filled with smoke for about half an hour, and their death will be the result. Myrtles, oranges, &c., are infected with a brown scaly insect, which cannot be destroyed by tobacco smoke. They must be washed, leaf by leaf, with a piece of sponge, dipped in a mixture of soap and water, impregnated with a little tobacco. The whole should be well mixed, and used a little warm.

Yours, ROBERT MURRAY.

Waltham, Nov. 27th, 1835.

The above communication we cannot too strongly recommend to the notice of those of our readers who cultivate plants in rooms, more particularly to our fair friends, who are desirous of preserving their plants in good health. We hope Mr. Murray will continue his remarks, and treat more minutely on several of the species and varieties which flourish best in such situations.—*Conds.*

ART. IV. *Beautiful Plants growing wild in the Vicinity of Boston.*
By E. B. KENRICK, Watertown.

(Continued from Vol. I, page 458.)

All these plants are perennial, unless intimation is given to the contrary.

Viola acuta Acute petaled Violet. This is our smallest native species. It is peculiarly distinguished by its acute petals, and the great length of its linear bractes. Stemless. Root creeping. Leaves smooth, ovate-lance-formed, with stems nearly winged. Flowers white. Petals oval, remarkably flat and acute, the odd one being widened at top, and streaked with purple at base.—Moderately moist soil.—Cambridge.—May, June.

Viola palmata Palmate Violet. Stemless. Root denticulate, as if small teeth were strung together. Leaves pubescent, veiny, heart-shaped, hand-formed [with spreading fingers], or halbert-lobed, the lobes being indented, and the middle one much the largest. Flowers middle sized, fine purple, the two lateral petals having glandular beards.—Low grounds.—May.

Viola pedata Pedate Violet. Stemless. Root abrupt, as if bitten off. The leaf is shaped like a bird's foot, having a central segment or leaf which is simple, and two lateral ones, which are compound. Flowers large. Petals pale purple, white or yellowish at the base, none of them either bearded or streaked.—Rocky hills, and dry woods.—May, June.

Viola sagittata Arrow-leaved Violet. Stemless. Leaves smooth, oblong, or ovate, heart-arrow-shaped, gashed at the base, bluntly serrate or saw-toothed, the lower teeth large, divergent, and giving the leaf a halberd appearance. Flowers inverted, middle sized, with dark purple petals, white at base, strongly bearded.—Cambridge.—May, June.

Viola ovata Spade-leaved Violet. Stemless. Leaves hairy, or woolly, on both sides, crenate or scalloped on the edges, ovate, or shaped like the spade on a card, and sometimes cut at the base like the arrow-leaved violet; leaf stems margined or winged. Flowers middle sized, pale purple, very numerous.—Dry hills.—April, May.

Viola cucullata Hood-leaved Violet. Stemless. Leaves strongly heart-shaped, somewhat kidney-formed, indented on the margin, rolled in at the base, so as to give them a hood-like appearance. The leaves are commonly much shorter than their stems. Flowers large, purple, the lateral petals stiffly bearded. This is the most common violet of our wet meadows and low grounds.—May.

Viola débilis Spreading Violet. Stem weak, angular, branching below. Leaves reniform-cordate [or kidney-shaped and heart-shaped combined], upper ones indented on the rim, and ending in a sharpish point. Flowers pale purple, small, with stems longer than those of the leaves; the two lateral petals bearded inside.—Concord turnpike, Cambridge.—June.

Viola pubescens Yellow Violet. Stem erect, leafy towards the top, and having long soft hairs. Leaves broad, heart-shaped, indented on the margin. Petals yellow, streaked with dark purple.—Dry stony woods.—Found at Newton; likewise on the Concord turnpike, Cambridge.—June.

Dr. Eaton says, that *Viola pubescens* varies much in height—usually from six to eight inches; but that he has found it twenty inches high; and that Dr. Solon Smith showed him a specimen four feet high, which he found in New Hampshire.

Professor Nuttall informs us that, excepting the *Viola concolor*, all the North American species of violets, after their blossoming season is over, produce flowers *without petals*, through the rest of the summer.

“According to Lightfoot, the Highland ladies of former times used the violet as a cosmetic, the old Gaelic receipt being, ‘Anoint thy face with goats’ milk in which violets have been infused, and there is not a young prince upon earth who will not be charmed with thy beauty.’”

FLOWERING SHRUBS.

ANDROMEDA.

Andrómeda polyfólia Water Andromeda. A most delicate shrub, from twelve to eighteen inches high. The leaves are slender, lance-formed, very short stemmed, smooth and veined above, convex, rolled outward at the margin; of an evergreen aspect, a fine bluish, or glaucous dark green above, and a pure bluish white beneath. Calyx white, in five divisions, tipped with red. Flowers round, pitcher-formed, five angled, pale flesh-colored; on short, terminal, nodding stems, divided, or subdivided.—Wet, mossy bogs. Edges of Hammond’s Pond, east part of Newton.—Blossoms in May.

ARONIA.

Arònia batryàpium L. *Pyrus batryàpium* Wood Pear, June Berry. This plant is sometimes taken for a pear tree, which it resembles. Occasionally, it forms a small tree; but blossoms profusely, and bears fruit, when a yard or two high. The leaves, when first expanded, are lanceolate, and covered with a silky down; but when mature, they are hairless on

both sides, oblong-oval, sometimes heart-shaped, finely and sharply toothed, and have a long acute point. Calyx with five segments, downy within. Petals five, grass-formed, broadest towards the tip. Blossoms white, growing on racemes, or branching stems, from four to seven flowered. Fruit dark purple, pear-shaped, of the size of a medium cherry; eatable, resembling the whortleberry in taste, and ripening in June.—Woods, Newton, Brookline, &c.—May.

AZALEA.

Azàlea lappónica L. *Rhododéndron lappónica* Mountain Honeysuckle. A beautiful, low, alpine shrub, resembling the rhododéndron. Leaves evergreen, leathery, oblong-oval, standing disorderly, roughened above with small white pits, the under surface paler, and dotted with black. Calyx and flower stems red, covered with light green glands; segments of the calyx ovate, eyelashed. Corolla deep purple, bell-shaped, with four oblong, obtuse divisions. Flowers large, in terminal, and rather umbel-shaped clusters.—High mountains; White mountains, N. H.—Blossoms in July.

Azàlea nudiflòra L. Naked Azalea. An exceedingly beautiful shrub, from two to six feet high: Leaves oblong-lance-formed, nearly smooth, green, of the same color on both sides, having the margin fringed with parallel hairs, and the midrib bristly beneath. Calyx teeth short, somewhat rounded. Corolla red, with a tube longer than the divisions, and stamens much protruded. Flowers somewhat naked, but not viscous; arranged in terminal clusters.

A variety, *coccinea*, has scarlet flowers, and lanceolate leaves. Another, *rùtelans*, has deep red flowers, and a minute calyx. Another variety, *cárnea*, has pale red flowers, with red bases, and a leafy calyx. Another, *álba*, has white flowers, and a medium calyx. Another yet, *papilionàcea*, has red flowers, with the lower divisions white, and calyx white. And another, *polyándria*, has rose-colored flowers, with from ten to twenty stamens.—Woods and copses; Worcester, Princeton, Douglas, &c.; perhaps, also, in or near Waltham.—May or June.

Azàlea viscòsa Wild Honeysuckle, Swamp Pink. A fine flowering shrub, from four to eight feet high, very common among the brush-wood in low land. The small branches and the flower stems are more or less bristly. Leaves crowded, inverted lance-egg formed, acutely tipped, smooth and green on both sides, eyelashed, hairy on the midrib, and nearly without indentures on the margin. Corollas funnel-shaped, varying in color, but commonly white; hairy and glutinous on the outside. Flowers sweet, spicy-scented, in terminal, umbel-like corymbs, or flattish topped clusters.—Wet woods.—June, July.

CEANOTHUS.

Ceanothus americanus New Jersey Tea. A delicate flowering shrub, from two to four feet high, with a root large and red. Leaves alternate, three-nerved, fine pure green, pubescent beneath, two or three inches long, and one inch broad, tapering into a long point, and finely notched on the margin. From the axils of the upper leaves, arise leafless branches, bearing crowded, panicle clusters of white flowers, on very slender, white stems. Calyx divisions five, bent between the petals. Petals five, hooded at their tops, and supported on slender claws, which project, together with the stamens, between the divisions of the calyx. Around the germ, is a small circle of green. The fruit is a dry, three-celled, blackish, somewhat triangular berry, growing in close bunches. The leaves have been substituted for tea.—Not unfrequent in woods, in dry, sandy soil. Grows near Mount Auburn.—Flowers in June and July.

CELASTRUS.

Celastrus scandens Waxwork, Climbing Staff. A strong woody vine, twining around small trees, and sometimes rising to the height of thirty, or perhaps even fifty feet. I have traced one of its roots sixty feet without arriving at the end; although the largest part of the root, or of the stem, was not a half an inch thick. I believe it is not uncommon for two of these vines to intertwine, and bear each other up without foreign support. Leaves oblong, notched in the margin, long-pointed. Flowers greenish white, minute, in small clusters with branching stems, growing on the ends of young shoots. The fruit is a berry inclosed in a round, three-valved capsule, as a walnut is inclosed in the hull. When the fruit is ripe, the valves or hulls turn backward, without falling off, and disclose a berry of a deep scarlet, finely contrasted with the lighter scarlet of the valves; the whole appearing like a flower of waxwork.—Woods, thickets, &c.—June.

CEPHALANTHUS.

Cephalanthus occidentalis Button Bush. A frequent ornament of water sides, where it rises to the elevation of five or six feet. Leaves tough, egg-shaped, pointed, not indented on the margin, and standing either opposite, or in threes. Flowers sweet scented, white, crowded into globular heads, about an inch in diameter, and appearing, at a distant view, like the balls of the plane or button-wood tree. “The appearance of this shrub on elevated ground, often indicates the presence of springs of water.”—Swamps, &c.—July.

Yours,

Watertown, Sept. 9th, 1835.

E. B. KENRICK.

(To be continued.)

ART. V. *Observations on the Caméllia, and its Varieties, with some Account of its Introduction into Great Britain and this Country.* By M. P. WILDER.

(Continued from Vol. I, p. 138.)

Varieties of the *Caméllia japonica*.

1. *Caméllia japonica álba simplici.*

Single White Camellia.

This camellia is of strong, robust growth; the foliage large, and more deeply veined than almost any other variety; the flowers are of a pure white color, and the formation like the single red. This is one of the very best, either to produce seed, or to cross other kinds with. Of its origin, Messrs. Chandler and Booth remark: "Some persons are of opinion that it was imported from China, but we believe it now more generally known to have been raised from seed of the double stripe, by Mr. Rollison, of the Tooting Nursery."

2. *Caméllia japonica rùbra semi-dùplex.*

Semi-double Red Camellia.

This has a flower similar to the single red, except that it has two or more rows of guard petals.

3. *Caméllia japonica álba semi-dùplex.* Chandler & Booth.

Palmer's semi-double White Camellia.

The habit and foliage of this plant is said to resemble the pomponé and pæony flowered; the flowers are large, measuring four to four and a half inches, furnished with two or three rows of exterior petals of a delicate white color, and filled in the centre with a crowded column of stamina. It is supposed to be a Chinese variety, and to have been introduced about 1822. It is seldom to be met with in our collections.

4. *Caméllia japonica flòre plèno álba.*

Double White Camellia.

Bourbon Camellia.

This splendid variety was imported from China into England in 1792, and is not only one of the oldest, but the most generally admired of all the camellias. The flowers are of a pure snowy white, from three and a half to four and a half inches in diameter, and regularly formed; the petals being arranged one over the other, in the most regular order to the very centre. It is one of the earliest to come into flower in cultivation, and a large plant will continue to bloom for four or five months.

5. *Caméllia japonica variegata*. Loddiges' *Botanical Cabinet*.
Double Striped Camellia.

This old, but deservedly esteemed variety was introduced into Great Britain in the same year with the double white. It is of robust habit, flowers early and abundantly, and will sometimes produce seed. The flowers are of a fine rose color, three or four inches in diameter, and striped or blotched with white; like all the variegated kinds, it is apt to sport, and will occasionally show a plain red flower. It is said by experienced cultivators, that this variety is degenerating, and from my own observation, I am inclined to the same opinion.

6. *Caméllia japonica rubra plena*. Loddiges' *Botanical Cabinet*.
Greville's Red.
Double Red Camellia.

This camellia was imported from China in 1794, and of which Messrs. Chandler and Booth observe: "Some confusion exists in regard to this variety, from its being cultivated in many collections under the name of the *Old Red*, and *Greville's Red*, both being considered distinct varieties; but after having compared plants with these names that were subjected to the same treatment, we are satisfied there is no difference whatever between them, their flowers being precisely the same in every respect. The flowers are from three to three and a half inches in diameter, of a crimson red color, and resemble the flower of a large double hibiscus."

7. *Caméllia japonica incarnata*. Loddiges' *Botanical Cabinet*.
Buff or Hume's Blush.
Lady Hume's Blush.

This charming variety was imported into England in 1806, by Lady Hume, whose name it bears. The plant is of a slender and straggling growth; the flowers of a clear flesh-color; the petals regularly arranged over each other, after the manner of the double white, and somewhat recurved. The formation of this flower is, in some instances, so regular, that its appearance is hexangular, and has, on that account, been taken for *C. hexangulàris*; the true *hexangulàris* is, however, not a white, but a red flower, and is supposed to be either *myrtifolia*, or a variety thereof. In the *Camellias de Bolwiller* there is a drawing of *C. incarnata*, and another variety called *rosea flavescens*, and from a comparison of the plants and foliage, I cannot doubt their being one and the same, although *flavescens* is described as a white-clear-yellow and rose, completely full, and *incarnata* is a clear flesh-color, and hexagonal. I have imported these varieties from France, for the purpose of proving them, and will communicate it, should they not turn out synonymous.

8. *Caméllia japónica Pomponia*. *Botanical Register*.*Kew Blush*. Curtis's Monograph.*Ladies' Head Dress Camellia of the French*.

About this variety there exists a great diversity of opinion; some contending that it is as distinct as any in cultivation, always bearing a white flower; others, that it produces the red, white, and blush, pæony flowered on the same plant. Of the former opinion, are Messrs. Chandler and Booth, and of the latter, Messrs. Baumann, in their *Camellias de Bolwiller*. There is a variety known among cultivators as *C. variabilis*, or various flowered, which I think can be no other than the pompone; and I am confirmed in the opinion from the circumstance of having had, during the last winter, on a plant of the pompone, at the same time, a pure white, and also a pink flower. The plant is of free growth, but of slender habit, and usually produces a white flower, slightly tinged at the base of the petals with pink, and sometimes faintly striped with the same color. Wishing for ocular demonstration in regard to this variety, I ordered, a year or two since, from the Messrs. Baumann, and also from the Messrs. Chandler, a plant each of the pompone, *variabilis*, and pæony flowered, and will give you the result of my experience the present winter.

9. *Caméllia japónica rosea*. *Chandler & Booth's Illustrations*.*Caméllia japónica carnea*. Hort. Soc. Trans.*Caméllia japónica rosacea*. Curtis's Monograph.*Middlemist's Red Caméllia*.*Rosea plena*. *Camellias de Bolwiller*.

This camellia was introduced into England in 1804, by Mr. Middlemist, a nurseryman, and has been cultivated under a great variety of names. The plant is of very rapid growth; branches erect, and is a valuable sort to inarch costly varieties upon. The flowers are of a pale rose color, and the petals less numerous than in most double varieties. The style is sometimes perfect, and from it have been produced some fine sorts; several drawings having recently appeared in the English periodicals, which, if not exaggerated, must be truly splendid, and will rank with the first order. These (seven varieties) were all raised at the seat of Mr. Campbell, member of parliament from Lancashire, and are named *Hendersoni*, *heteropétela álba*, *Campbellii*, *venustum*, *Adelàidei*, *Juliàni*, and *heteropétela rùbra* [I. p. 343].

10. *Caméllia japónica anemoneflora*. *Botanical Magazine*.*Warratah Caméllia*.

This is one of the original Chinese kinds imported into Great Britain in 1806. The growth of this plant is strong and robust, the leaves of a very dark shining green color, flat

and pendulous ; the flower buds of a dark brown color, and very pubescent. The color of the flower is a dark crimson, and the shape that of an anemone, from which it derives its name. There is a variety called *crassinervis* [of the English catalogues], much resembling the *warratah* ; it is readily distinguished by its having seven guard petals, while the latter has but five. The *warratah* is one of the finest for raising seed, it being without stamens, and the style always prominent and visible. From this variety have been produced more new and beautiful seedlings, than from any other sort. It is the parent of *eximia*, *élegans*, *corallina*, *Chandlerii*, *Concinna*, *florida*, *Woodsi*, *althæflora*, &c.

11. *Caméllia japonica myrtifolia*. Hort. Soc. Trans.

Myrtle-leaved Caméllia.

Involuta, or *Lady Long's*, of some catalogues.

There is probably no longer a doubt that this is the same variety that has been cultivated under the different names of large myrtle leaved, small myrtle leaved, *involuta* or *Lady Long's*. It is also said to be the kind known in China as *C. hexangulæris*. It was introduced in 1808. It is a beautiful variety ; the flower of a pure rose color, very compact and regular in its formation, after the style of the double white ; and is said to be a little fragrant, although I never could perceive it. It is not usual, but I have seen a few perfect stamina, and with the pollen, impregnated the *warratah*, and obtained seed. This plant is of very slow growth, not obtaining a large size for many years. The largest I have ever seen is now in the possession of the Messrs. Hovey, being about six feet in height.

12. *Caméllia japonica fimbriata*. Trans. Hort. Soc.

Fringed Double White.

This lovely variety resembles the double white in almost every respect, both as it regards foliage and flower, except that the latter has the peculiar and singular character of being fringed after the manner of the *picotee*, and is the only variety yet known, unless it is *Park's rose stripe* (which I hope soon to see the flower of) that has this remarkable characteristic.

13. *Caméllia japonica pæoniæflora rosea*. Chand. & Booth's II.

Red Pæony-flowered Caméllia.

See *C. Pomponia*. This I believe to be a distinct and the only variety of the *pæony-flowered*, having blossomed with me for three or four years past, and invariably produced a rose-colored flower. The habit and foliage of the plant strongly resemble the *pompone*.

14. *Camellia japonica atropurpurea*. Loddiges' Bot. Cab.
Loddiges' Red Camellia.

This camellia was first introduced by the Messrs. Loddiges, of Hackney, Eng., from China, and has since borne their name. It is a good variety; the flowers are crimson, and more persistent than any sort I am acquainted with, often remaining on the plant in considerable perfection for several weeks.

Yours,

Dorchester, Dec. 1835.

M. P. WILDER.

(To be continued.)

ART. VI. *Notices of new and beautiful Plants figured in the London Floricultural and Botanical Magazines; with some Account of those which it would be desirable to introduce into our Gardens.*

Edwards's Botanical Register, or Ornamental Flower Garden and Shrubbery. Each number containing eight figures of Plants and Shrubs. In monthly numbers, 4s. colored, 3s. plain. Edited by John Lindley, Ph. D., F. R. S., L. S., and G. S., Professor of Botany in the University of London.

Curtis's Botanical Magazine, or Flower Garden Displayed, containing eight plates. In monthly numbers, 3s. 6d. colored, 3s. plain. Edited by William Jackson Hooker, L. L. D., F. R. A., and L. S., Regius Professor of Botany in the University of Glasgow.

Notes relating to Floriculture.—The *British Botanist's Magazine* is about to appear in London, conducted by Joseph Harrison. Also, a *Companion* to the Floricultural Cabinet and Florist's Magazine, by the same author. To be published monthly. The former is to contain colored plates of plants indigenous to Great Britain, with scientific descriptions, synonyms, &c. The latter to be embellished with three colored plates of the most ornamental plants.

The *Journal of Botany*, by Dr. Hooker, has been discontinued; and, to supply its place, the first number of the *Companion to the Botanical Magazine* appeared on August 1st. Each number contains two sheets of printed matter, accompanied with two plates partially colored. The price of the Magazine, with the Companion stitched in, is 4s. 6d.

DICOTYLEDONOUS, POLYPETALOUS PLANTS.

III. *Ranunculaceæ*.

PÆONIA.

Russii Bivone Crimson Pæony. A hardy perennial plant. Flowers crimson; appearing in May; propagated by division of the root. Bot. Mag., t. 3431.

This species is a fine addition to collections. The flower is single, from six to ten petals, but of a deep rich crimson, inclining to coral color. Dr. Hooker states that "so many

kinds and varieties of the pæony are now cultivated in our gardens, that it would puzzle the most acute botanist to mark the limits of the species." (*Bot. Mag.*, Sept.)

XXXII. *Ternströmiaceæ.*

CAMELLIA.

In the Floricultural Cabinet for September, another of the new kinds, raised at the seat of M. P. Campbell, in Lancashire, is figured. It much resembles, according to the colored plate, *C. eclipsis*, but the stripes are much darker and more distinct, running straight through the centre of nearly every petal. We have seen drawings of fine flake carnations which were not more regularly marked than this sort.

C. japonica elegans is now in flower at Hawthorn Grove, Dorchester. It is truly a most superb variety; we scarcely know of a pink flower of any kind in which the tint is so pure, deep, rich and lively. With the exception of a blossom which opened in our collection last spring, supposed *elegans*, this is the first that has flowered here. *C. japonica Gilesii* is a new variety Mr. Wilder has in his collection; the plant is yet very small. *C. japonica eximia* of the French and English have a great similarity of appearance in foliage; that of the former has flowered; but it does not resemble the figure in Chandler & Booth's *Illustrations*. It is a rose color, with a warratah centre.

Chorozema Henchmannii is figured in Paxton's Magazine of Botany for September. It is a splendid species; it was introduced into England in 1824. We wish plants of this genus were oftener met with in green-houses than they are at present.

LXXIII. *Rosaceæ.*

CRATÆGUS

coccinea L. Large flowered American White Thorn. A hardy plant, growing several feet high; flowers white; appearing in May. A native of North America. *Bot. Mag.*, t. 3432.

This "extremely beautiful plant," Dr. Hooker says, "is assuredly one of the greatest ornaments to our shrubberies, loaded, as it is in the month of May, with its large clusters of white, but scarcely fragrant blossoms." It is well known in our gardens for its highly ornamental character. (*Bot. Mag.* Sept.)

LXXVII. *Leguminosæ.*

CASSIA

glandulosa L. Glandular-leaved Cassia. A stove shrub, growing four feet high; flowers yellow, appearing nearly all the year. A native of Trinidad. Propagated by seeds. *Bot. Mag.*, t. 3455.

This is a valuable species; it is one of the few which require the heat of the stove to produce its blossoms, which it does in such situations "copiously for at least nine months out of the twelve." The branches are somewhat straggling and pendent, thus presenting the flowers to view under the highly graceful foliage. A desirable species, introduced from Trinidad. (*Bot. Mag.*, Sept.)

CXXXV. *Brixineæ*.

AZARA (named after Joseph Nicholas Azara, a Spanish gentleman, of whom nothing further is known, except that he was a patron of science)
dentata Ruiz et Pavon. Toothed Azara. A hardy shrub; flowers yellowish; propagated by cuttings and layers. A native of Chili. Bot. Reg., t. 1788.

“A very handsome evergreen bush, with remarkably glossy deep bright green leaves.” It is hardy in England, but may not prove so in our climate. The flowers appear at the axils of the leaves, rather inconspicuous, and of a dull yellow color. The driest weather does not affect it in the least; on this account it would be a valuable addition to our collections, as it would flourish finely under our scorching sun. (*Bot. Reg.*, Sept.)

CLXX. *Ericææ*.

ARCTOSTAPHYLOS *Adanson.* (Bearberry, or Bear-grape, is a literal translation of the Greek words of which this name is composed).
tomentosa Arbutus tomentosa Pursh Downy Bearberry. A hardy evergreen shrub; flowers white; appearing in March. A native of North-West America. Bot. Reg., t. 1791.

“A curious and rare evergreen shrub, native of rocky places on the west side of North America.” It is the *Arbutus tomentosa* of *Pursh*. The plate represents a terminal shoot, on which is two pendent racemes of delicate white flowers; each raceme being compound, or divided into three or more parts of about equal lengths. It has flowered this season for the first time in England, in the open air, in the collection of William Harrison, Esq., of Cheshnut, where the plant has stood for four years. At Glasgow it is kept in the green-house. It grows in peat and loam in a sheltered situation. Desirable to introduce to our gardens. Appended to this plate are some remarks, by Dr. Lindley, on the importance of introducing into England several magnificent plants of the natural order *Ericææ*. These are the genus *Befaria*, which contains many species more beautiful than even *Rhododendron* and *Azalea*, the *Thibaudias*, with their long tubular crimson blossoms and species of the *Gaylassacia*. These, he states, “inhabit the Cordilleras of Peru, in the country of the Cinchonas.” From the dried specimens of several plants which have lately been received from Cinchona, Dr. Lindley has described and named “a most lovely plant” in honor of the Duke of Devonshire, one of the most noble patrons of science of the present day, and whose rare and valuable collection of plants at Chatsworth is becoming the most extensive and celebrated in England. It is called *Cavendishia*. It is “apparently an evergreen shrub, with foliage similar to a camellia.” The flowers are arranged in “terminal capitate racemes.” Corolla, tubular, bright crimson, an inch long.

We hope that the wealthy nobleman of England, will be stimulated to exertion by his excellent remarks. (*Bot. Reg.*, Sept.)

DICOTYLEDONOUS, MONOPETALOUS PLANTS.

CLXXII. *Vaccinææ*.

VACCINIUM

corymbosum *L.* *V. amœnum Hort. Kew.* *V. dimorphum Michx.* *V. fuscatum Pursh.* *V. formosum Andr. Bot. Mag.* *V. virgatum Wats.* Many-flowered Whortleberry. A hardy shrub; four feet high; flowers rosy white; appearing in May. A native of North America. *Bot. Mag.*, t. 5433.

Dr. Hooker unites all these species in *corymbosum*, and remarks that it is "well worthy a place in the garden." It is one of our commonest species, abounding throughout the country. (*Bot. Mag.*, Sept.)

CXCV. *Asclepiadææ*.

CALOTROPIS (literally "beautifully tinted," apparently in reference to the corolla of *C. gigantea*.)

procæra *R. Brown Asclæpias procæra Hort. Kew.* *Asclæpias gigantea Andr. Reposit.* Tall Calotropis. A stove shrub; growing ten or more feet high; flowers purplish red, appearing in April. A native of St. Jago. Introduced in 1832. *Bot. Reg.*, t. 1792.

This very singular plant "was raised in the garden of Sir Charles Lemon, Bart., M. P., at Carcleu, in June, 1832." The stem is round, pale green; leaves opposite; about five inches long. Flowers appear in terminal panicles, seven to ten in each; they are slightly campanulate, about an inch in diameter. The petals outwardly are of a pale silvery color, inside deep purplish red. Remains in flower several weeks. The juice of this plant is stated to be administered successfully in ringworm and other cutaneous affections. It flourishes freely in a soil of sandy loam and vegetable mould. (*Bot. Reg.*, Sept.)

CCIX. *Gesnerææ*.

GESNERA

faucialis *Lindl.* Wide-Mouthed Gesnera. A green-house plant; with deep red flowers; propagated like the other species. Introduced in 1834. *Bot. Reg.*, t. 1785.

The Hon. and Rev. Mr. Herbert considers this as the "finest of the genus." It is similar to *G. bulbosa*, but more brilliant. The flowers are terminal, about six, springing out in a raceme form, the penduncles of the lower ones gracefully pendent. It is a native of Brazil. (*Bot. Reg.*, Sept.)

CCXVII. *Bignoniææ*.

CRESCENTIA (so named in honor of Peter Crescentio, an Italian writer on agriculture).

cujète *Linn.* Calabash tree. A tree growing twenty or more feet high, requiring the heat of the stove; flowers white. A native of the West Indies. *Bot. Mag.*, t. 3470.

This is the calabash tree of which we hear so frequent mention, and the fruit of which is used for so many purposes by the natives of the West Indies. It has been cultivated in England ever since 1690, but has not flowered until the present year. These specimens were from the garden of Charles Horsfall, Esq. Pieces of the tree are frequently sent to England with epiphytes attached to them, and they easily grow when placed in the earth. The wood of the tree is used for innumerable purposes. (*Bot. Mag.*, Sept.)

REVIEWS.

ART. I. *Chemistry applied to Agriculture.* By JOHN ANTONY CHAPTAL, Count of Cantaloup, Peer of France, Member of the Institute, &c. First American, translated from the second French, edition. 1835. 12mo. pp. 365. Boston.

THIS work is laid before the American public as a more modern and perfect treatise of agricultural chemistry, being the results of the labors and studies of an eminent French chemist during many years' experience in such pursuits. Sir Humphrey Davy's Lectures were published in 1813, and ten years afterwards, appeared the first edition of the present work ; and, in 1829, a second edition, increased in several particulars. Although almost entirely of a local character, there are, nevertheless, several points of interest to every agriculturist applicable to all countries ; and some subjects, though often treated before, yet deserving renewed attention. The atmosphere and its influence on vegetation ; the nature of soils, and their action ; the nature of manures ; the vegetable economy and laws relating to the physiology of plants ; improvement of soil ; succession of crops ; treatises on the products of the farm ; cultivation of the beet for sugar,—are all particularly considered. One great merit is its simplicity and great plainness—the reduction of philosophical theory to simple truth.

Chemistry, as indeed the other sciences, have been too little regarded in connexion with the culture of the soil, and yet thousands are the errors which a better knowledge of what concerns the material on which we expend our labor, might be avoided by a better and closer attention to them. Seldom any thing but long experience, and this too often by the result of costly experiments, acquaint us with the nature of the soil, and what crops will best succeed on this or that land ; or whether it be more or less favorable to the increase of some insect or deleterious parasitic plant, which effects the produce. We could wish that different notions respecting this subject existed, and a yet more general diffusion of the correct and modern system of husbandry. Nor do these remarks apply only to our agriculturists, in the common meaning of the term, but those who minister among the more delicate productions of the garden, would do well to make themselves acquainted with the secret laws which govern the subjects of their care. Invested with these, they may render the barren wilderness a garden,

and, like some magician of old, command the rich treasures of the earth to come forth at their bidding.

Speaking of the nature of soils, our author remarks:

"In order that a plant should flourish in a soil, it is not always sufficient that the earths composing it are of the right kind, or suitably proportioned; it is necessary to unite other circumstances which are not always to be met with; for example, the arable soils which are based upon rocks, vary considerably in depth; and the thickness of the bed not only exerts an influence upon the powers of vegetation, but determines the kind of plant which can be cultivated upon it. The bed of earth ought to be from ten to twelve inches in depth for grain, and much more than that for clover, and sainfoin; for trees, it must be much deeper than for these, otherwise their roots, running but little below the surface of the ground, will extend their shoots to a great distance, and thus exhaust the strength of a large portion of soil. Trees are often found upon the sides of mountains, which are almost entirely devoid of a covering of earth, but in this case the chinks and crevices of the rocks supply the place of earth, or rather the rocks are of so spongy and porous a nature, as to permit the roots to penetrate them. In the Cévennes and Limousin, the most beautiful chestnuts are planted upon granite and free-stone; and the famous vines of the Hermitage prosper in a soil of granite decomposed at the surface."

Might not this be a useful hint in covering the barren sides of many of our New England hills, by planting among the *debris* which are broken from the tops? for we know that considerable excellent soil rests among the loose fragments, and moisture is longer retained than elsewhere. The grape flourishes in volcanic countries, among the loose and decomposing lava, with a luxuriance seldom equalled, and many of our native plants, as the *Rubi*, are found in great luxuriance in such places.

Again, on the subject of manures, are many important facts:

"The nutritive manures are those which contain juices or other substances, which, being dissolved in water, or otherwise divided to the most minute degree, are capable of being drawn into the organs of plants. All the vegetable and animal juices are of this description."

"The most useful art, perhaps, in agriculture, and that which requires the most care, is the preparation of dunghoops. It requires the application of certain chemical principles, which it is not necessary for me to explain, since it is sufficient to point out to the agriculturist the rules by which he should be governed in his proceedings, without requiring of him an extensive knowledge of the theory upon which they are founded.

"Solid substances, whether animal, vegetable, or mineral, do not enter into plants unless they are previously dissolved in water, or are drawn in with that fluid in a state of extreme division.

"Animal and vegetable substances which are, by their nature, insoluble in water, may, by being decomposed, form new soluble compounds, capable of furnishing nourishment for plants.

"Animal and vegetable substances deprived by the action of water of their soluble particles, may, in the course of their decomposition, form new compounds susceptible of being dissolved."

"The clippings and parings of horns form an excellent manure, of which the effect is prolonged during a succession of years, owing to the

difficulty with which water penetrates them, and the little tendency they have to ferment.

"A very good manure is likewise formed from wool. According to the ingenious experiments of M. Hatchett, hair, feathers, and wool are only particular combinations of gelatine with a substance analogous to albumen; water can only dissolve them by means of fermentation, which takes place slowly, and after a long time.

"One of the most surprising instances of fertile vegetation that I have ever seen, is that of a field in the neighborhood of Montpellier, belonging to a manufacturer of woollen blankets. The owner of this land causes it to be dressed every year with the sweepings of his workshops; and the harvests of corn and fodder which it produces are astonishing.

"It is well known that the hairs of wool transpire a fluid which hardens upon their surface, but which possesses the property of being easily soluble in water. This substance has received the name of animal sweat; the water in which wool has been washed contains so much of it, as to make it very valuable as a manure.

"A wool merchant in Montpellier, placed his wash-house for wool in the midst of a field, a great part of which he had transformed into a garden. In watering his vegetables, he had used no other water than that of the washings; and the beauty of his productions was so great, as to render his garden a place of general resort. The Genoese collect with care, in the south of France, all they can find of shreds and rags of woollen fabrics, to place at the foot of their olive trees."

"In the south of France, where they raise many silk-worms, they make make great use of the larvas, after the silk has been spun from cocoons. They are spread at the foot of the mulberry and other trees, of which the vegetation is in a languishing condition; and this small quantity of manure reanimates them surprisingly. Upon distilling some of these larvas, I found more ammonia than I have ever met with in any other animal matter."

The supposed *phenomenon* of the reappearance of seeds in lands very many years after sown, and hence the absurd theories of spontaneous generation, and the like, are thus overthrown by the true state of the vegetable vitality.

"Germination cannot well be carried on, unless the atmospheric air has access to the seed, which cannot be the case if the seed be buried too deeply in the ground, or if it be sown in a compact soil and closely covered over.

"It likewise follows, from these principles, that when the earth remains a long time covered with standing water, the seeds must decay, and also, that a seed placed in dry earth cannot germinate unless it be moistened.

"The impossibility of a seed's germinating, when too deeply buried in the ground, explains why we sometimes see, after deep tilling, plants making their appearance, of the same kind as those which had been cultivated upon the soil several years before. The state of the earth, as it regards moisture, at the time of sowing, furnishes a reason independent of the action of heat, why seeds are a longer or shorter time in sprouting."

Influence of carbonic acid on vegetation:

"The pieces of wood which support the roof of the long gallery which conducts to the beds of coal in the coal mines of Bousquet, in the department of Beziers, were loaded with that species of mushroom which usually fixes itself upon the trunks of old trees; the entrance of the gallery is very light, but the light gradually diminishes till it is lost in

total darkness. I was much struck, in passing through this gallery, with the different appearances presented by the mushrooms in the various degrees of light; those at the entrance were yellow, and their texture so compact that they could hardly be broken by the hand. As I advanced, the reddish yellow color grew gradually fainter, and the texture of the plants more soft and spongy, till at the bottom of the gallery, where a ray of daylight never penetrates, I found the mushrooms, though as large as those at the entrance, perfectly white, and nearly without consistency, so much so, that upon pressing them with the hand, they were found to yield much liquid, and but little fibrous matter. I filled several bottles with these, and took in my hands some of those from the middle and entrance of the gallery. A comparative analysis of these various portions afforded me, from those which grew at the bottom of the gallery, only water saturated with carbonic acid, a small quantity of mucilage, and a little parenchymous fibre swimming in the liquid. The proportion of acid was much less, and that of ligneous fibre more considerable, in the mushrooms plucked from the middle and entrance of the gallery, particularly in the last. Those from the dark part of the gallery contained only the elements of nutrition not elaborated; whilst in the other, the process of assimilation was carried on more or less perfectly, in proportion as light and atmospherical air had access to them to facilitate vegetation; otherwise, as carbonic acid was most abundant in those plants which grew in darkness, their texture ought to have been the most thoroughly impregnated with it."

On the succession of crops, as superseding the old custom of suffering ground to lie fallow, in order to renovate it, we are told,

"A good system of cropping is the best guarantee of success that the farmer can have; without this, all is vague, uncertain and hazardous. In order to establish this good system of cropping, a degree of knowledge is necessary, which unhappily is wanting to the greater part of our practical farmers. I shall here state certain facts and principles, which may serve as guides in this important branch of agriculture."

Principle 1. All plants exhaust the soil.

" 2. All plants do not exhaust the soil equally.

" 3. Plants of different kinds do not exhaust the soil in the same manner.

" 4. All plants do not restore to the soil either the same quantity or the same quality of manure.

" 5. All plants do not suffer weeds to fill the soil equally.

From such principles carried into detail, the author lays down the following conclusions:

"1st. That however well prepared a soil may be, it cannot nourish a long succession of crops without becoming exhausted.

"2d. Each harvest impoverishes the soil to a certain extent, depending upon the degree of nourishment which it restores to the earth.

"3d. The cultivation of spindle roots ought to succeed that of running and superficial roots.

"4th. It is necessary to avoid returning too soon to the cultivation of the same or of analogous kinds of vegetables, in the same soil.

"5th. It is very unwise to allow two kinds of plants, which admit of the ready growth of weeds among them, to be raised in succession.

"6th. Those plants that derive their principal support from the soil should not be sown, excepting when the soil is sufficiently provided with manure.

"7th. When the soil exhibits symptoms of exhaustion from successive harvest, the cultivation of those plants that restore most to the soil, must be resorted to."

Enough has been quoted to show the spirit and character of the book before us. We will only add, for the gratification of our floral and horticultural friends, that a very interesting North American plant bears the name of the author; we mean "*Chaptalia tomentosa*" (*Venteuat*).—*R.*

ART. II. *The New American Orchardist, or an Account of the most valuable Varieties of Fruit of all Climates, adapted to Cultivation in the United States, &c.; and the Culture of Silk. With an Appendix on Vegetables, Ornamental Trees, Shrubs and Flowers.* By WILLIAM KENRICK. Second edition, enlarged and improved. Boston. Russell, Odiorne & Metcalf, and Hovey & Co. 1835. 1 vol. 8vo. pp. 418.

WE congratulate all pomologists and lovers of good fruit in the United States upon the appearance of a second edition of this valuable work. In those sections of the Union, especially where the same enclosure often produces, with but trifling care, so many of the most delicious fruits of temperate climes; where the use of walls for the ripening of fruits is scarcely at all necessary, and is comparatively unknown; where the peach, the apricot, the cherry, the pear, the plum and the apple, acquire their luscious flavor in full perfection during the long, dry, sunny days of our warm summers—a work like the present must be peculiarly valuable. So congenial is our situation to most of the fruits of temperate latitudes, that excellent varieties of apples and peaches have sprung up in our orchards almost, as it were, spontaneously, yielding annually thousands of bushels of superior fruit; but the unwearied and indefatigable exertions of the scientific cultivators of Europe have produced, within the last five years, an immense number of new varieties of the best fruits which, for excellence of flavor, duration and beauty of appearance, have excited the astonishment of all persons. This is more particularly the case with regard to the

delicious *pears* of Belgium. To all persons, therefore, who wish to make selections of the most desirable of these varieties (and they can nearly all be procured in the nurseries at the present time) the *American Orchardist*, in its plain and accurate descriptions and synonyms, will be found an invaluable manual. The zeal for pomology in the vicinity of Boston has accumulated more information in that quarter, upon all branches of the subject, and especially in relation to the new fruits, than can be found in any other part of the Union; and Mr. Kenrick, we perceive, has availed himself of the assistance of the most distinguished connoisseurs of that neighborhood and of other districts of the country in addition to his own accumulated information and experience on the subject.

In the first part of the work, we find sections devoted to the following subjects: climates, utility of fruits, new varieties of fruits, the growth of trees and plants, transplanting, propagating, inoculating, grafting, fruitfulness, pruning, and noxious insects; all of which are treated in a concise and perspicuous manner; and the different practical operations recommended are generally founded upon the soundest principles in vegetable physiology. In addition to this, and following each different family of fruits, will be found ample directions for their culture, and information as to their uses, and the different maladies and diseases to which they are subject.

In the chapter to which Mr. Kenrick devotes to "observations on the new varieties of fruits," we perceive that he adopts unequivocally the well known theory of which the celebrated president of the London Horticultural Society may be considered the champion, viz.: that "the different varieties of fruit have their period fixed by the immutable laws of nature; and after a certain time, either sooner or later, comes on their decline and final extinction." As additional proof of the truth of this theory, the author before us makes the following remarks:

"In our own country, and in the vicinity of Boston, it has been more especially observed in regard to the old *pears*. For, except in certain sections of the city, and some very few solitary and highly favored situations in the country around, they have become either so uncertain in their bearing, so barren, so unproductive, or so miserably blighted, so mortally diseased, that they are no longer to be trusted;—they are no longer what they once were with us, and what many of them are still described to be by most foreign writers." p. 25.

We perceive that, in his description of the old *pears*, Mr. K. has mentioned the following kinds as having become degenerated, or as he significantly terms them, "*outcasts*." Jargonelle, Brown Beurré, Doyenné (Virgoulouse or St.

Michael), Chaumontelle, St. Germain, Royal d'Hiver, Colmar, &c.

Now, although we do not presume to make war with the theory of Mr. Knight, which we believe to be, in a great measure, substantiated by the facts which that learned and ingenious physiologist has, together with contemporaries on the continent, brought forward to support it; yet, on reading the above, which is intended to be inculcated in the whole of the United States, we very naturally regretted that the author before at once recording it as another and conclusive proof of the theory of *degeneration*, had not more thoroughly examined *our own country* at large, in order to satisfy himself whether the facts and circumstances that he states in relation to the "outcasts" are *general* or only *local*. For our own part, we believe them to belong entirely to the latter class, and therefore that the effects which he details (and which we know, from actual inspection, to be true at Boston), arise from some other cause than the decay of the variety through age. In the valley of the Hudson, where we pen these remarks, most of the above fruits which are described as worthless, have been cultivated for nearly, if not quite as great a length of time as at Boston. Our nurseries in the vicinity of New York, are among the most ancient in America, and we believe that some of the above fruit found their way into the different sections of the Union through their medium. So far from rejecting such fruits as the Brown Beurré, Doyenné or Virgoulouse, &c., as worthless outcasts, they still deservedly hold their place here among the first class of pears, and we have the present season gathered Doyennés, Brown Beurrés, St. Germain, &c., as fair, as beautiful, as delicious, as, we doubt not, were ever seen or tasted from the parent trees of these noble varieties. The above kinds bear fine and abundant crops of fruit in the State of New York, even in situations *much farther north* than Boston. We never saw finer, nor tasted more delicious Doyennés or Virgoulouses, than in the markets of Philadelphia the past season. The same may be said with regard to the city of New York. We can by no means, therefore, agree with Mr. Kenrick in his opinion that the above varieties of pears are worn out with age, at least in this country, and we are inclined to believe that the deplorable state of these pears in the vicinities of Boston and Providence must have for its cause some other circumstances,—as some peculiarity in the soil unfavorable to the long duration of a variety, or the evil effects which may gradually be produced by the marine winds of those cities, which sweep with violence over a considerable portion of the adjacent country. It is proper to remark that Mr. K. does not mention any similar

effects that have taken place among the other fruits, and that the horticulturists of Boston succeed in raising the delicious and highly flavored new Flemish pears in the highest perfection.

The description of the different mulberries, including the celebrated Chinese *Morus multicaulis*, occupies, very properly, a prominent place in the American Orchardist. The author's directions for the rearing of the silk worm, bear the mark of knowledge and research upon the subject, and will be found valuable at the present time, when the silk culture is occupying so largely the public attention.

We are gratified to find also a number of pages devoted to the description and modes of culture of the tropical fruits which may be acclimatized in the southern section of the Union. We would earnestly call the attention of our neighbors of the Floridas, Louisiana, Georgia and the Carolinas particularly to this subject. We are convinced that, by proper care and exertions, a number of the tropical fruits may become objects of extensive cultivation in those States. The olive now grows in Europe as far north as the 45° of latitude, and Mr. Kenrick informs us that the tea has been successfully cultivated in Franconia, latitude 49° north! The plantain and banana will, we are convinced, produce abundant crops in Florida, and we would suggest to southern horticulturists to attempt the naturalization of the Chinese guava (*Psidium Cattleianum*), the fruit of which ripens in our hot-houses in the northern States, and possesses all the delicious flavor of the strawberry. The rose apple (*Eugenia jambos* L.—now called *Jambosa vulgaris*) with fruit resembling the apricot, and the *mangostan*, we have but little doubt may, by proper means, be naturalized in many of the southern sections of the Union.—D.

ART. III. *A Discourse delivered before the Massachusetts Horticultural Society, on the Celebration of its seventh Anniversary, September 17th, 1835.* By JOHN LEWIS RUSSELL. Pamphlet, 8vo., pp. 36. Boston, 1835.

THIS is one of the most interesting addresses that has been delivered before the society. Brief as it is, to those that have been heretofore delivered, unless we except Mr. Gray's,

last season, it abounds with correct views and sound opinions, of the importance of the study of horticulture, and its usefulness to the physical wants of mankind. It should be read by every horticulturist, and, as the society has a sufficient number of copies to supply every member *gratuitously*, we hope they will not lose the opportunity of applying for one. To those persons at a distance, the secretary is, we believe, directed to send copies when called upon to do so. We are anxious to have it extensively read, as we are convinced it will be found to contain much that is worthy of being treasured up by the lover of gardening.

We have but little room to spare for extracts, or we should be happy to point out some of the most valuable portions to our readers, and also offer some observations upon some parts of it, which, if we do not materially differ from Mr. Russell in the opinions he expresses, we do not exactly agree.

We cannot, however, pass over one important subject which Mr. Russell has touched upon, namely, the correcting the nomenclature of fruits. With some observations on the institution of an experimental garden, he concludes:

“There is, perhaps, no branch of horticulture which needs so much correction as does this. Owing to various practices, our catalogues of fruits are but so many lists of misnomers and long standing errors. It is the duty of scientific institutions, like our own, to correct this abuse. Much has already been done in England, but much more remains to be accomplished. In no better place, nor under no more propitious circumstances, could this be effected, than by our efforts. By critical examination, conducted on the true principles of vegetable organography—by the comparison of living specimens, an experimental garden affords every assistance. The effect of soil, exposure, and each modifying accident, which influence the productions of fruit, could be thoroughly analyzed. A correct list, suitable for cultivation, not only of our own, but of other countries, might be formed; a single item, worthy in itself of united labor and enterprise. The promotion of that spirit of improvement, which elevates the standard of taste for the excellent and beautiful by an attention to rural studies, is at all times highly commendable; but the promotion of the spirit of utility should surely be combined with it.”

We have long been convinced of the fact, that the catalogues of our nurserymen have contained numerous errors; and we state this because we believe Mr. Russell has been thought, by some nurserymen, to have been too sweeping in his remark, that these catalogues were “but so many lists of misnomers.” We repeat, that too little attention has been given to this most important subject, and that a catalogue has always been considered as so many kinds, rather than so many *truly* named valuable varieties. We do not lay this fault to our own nurserymen, some of whom may have taken exception to the language of Mr. Russell, for we believe them to have no interested motive for so doing. These

errors have been committed by others, and they, not aware of such, have unknowingly perpetuated them. But we hope to see catalogues for the future, made up with more care and labor, and the errors gradually eradicated. An experimental garden, we have no doubt, would hasten this ; but it is an expensive method, and, in the present state of our knowledge, would be attended with some trouble. To the address is appended an account of the society's exhibition, the names of the subscription and honorary members, &c.

MISCELLANEOUS INTELLIGENCE.

ART. I. Foreign Notices.

Useful qualities of the Chinese Ailantus.—M. Vilmorin has lately communicated to the Horticultural Society of Paris, a letter from M. Farel, of Montpellier, accompanied with two specimens in the rough of the wood of the Chinese ailantus. This wood, said he, is now in much repute with wheelwrights, who employ it, together with the ash, though perhaps not so valuable as this latter tree ; it serves for the shafts of carts and the tongues or poles of carriages ; the tree thrived with vigor in the dry and poor soils of that warm country. It is also placed in the first rank by the engineers of bridges and highway *pour la bordure des grandes routes*. I have already cut up into scantlings and planks some of the ailantus which were planted at Fromont scarcely twenty years ago, and have found them to answer an excellent purpose. When this tree, felled at maturity, is dried slowly in the shade, it assumes a fine color, and is susceptible of a polish which will make it valuable for many kinds of joinery work. The trees raised from seed by no means produce suckers in such quantities as when raised from suckers themselves, especially if sown upon the place where they are intended to remain.—*Soulange Bodin. — Annales des Fromont.*

Note on the above.—The *Ailantus glandulosa*, or *Celestial Tree* (as it is called in New York), has become a great favorite as an ornamental tree in this country, particularly for the avenues and public squares of cities. From its rapid growth, it will probably produce a large bulk of valuable timber as soon, or in a shorter time than any other tree. By the above extract from the *Annales des Fromont*, we perceive this tree ripens seeds in France. It is *monœcious*, and although the trees have flowered abundantly here and in other gardens in the United States, we believe as yet none but *staminate*, or male flowers, have been produced. The tree has long been known in Rhode Island, where it was introduced, and is probably still known there by some under the name of Tillon tree. These trees must now be many feet in diameter, and persons who are in possession of information on the subject, would solve an interesting question to botanists and cultivators by making known whether or not they have yet produced seed or even *pistillate* or female flowers.—*A. J. Downing, Botanic Garden and Nursery, Newburgh, N. Y., November, 1835.*

ART. II. Domestic Notices.

Cultivation of the Pine-Apple.—It is with great pleasure that we inform our readers, and more particularly those who have long wished to see the cultivation of the pine-apple commenced in good earnest in this country, that there is to be erected, in the course of the next year, at the residence of the Hon. T. H. Perkins, at Brookline, a pit, a succession and a fruiting house, to be entirely devoted to the growth of the pine-apple. We have long been desirous that their cultivation should be begun, as we are certain that no individual, who has the means, when once convinced that they can be produced almost as easily as any other fruit, will think that his forcing department is complete, until he raises this greatest of all luxuries. At Belmont Place and Broomley Vale, there are several pine plants in the stoves; but at neither are houses for their cultivation alone. At another opportunity, we hope to give more information on this subject.—*Conds.*

The ruinous effect of the fall influence of the Sun, upon several grape vines, and the more prosperous state of others on which its influence was less powerful. [At p. 383, are a few notes on the garden of Wm. Oliver, Esq., Dorchester. We particularly mentioned several grape vines, part of which were touched with mildew, while others immediately by their side, were wholly uninjured. These remarks were hastily made, and do not, in any respect, correspond with the views below respecting the influence of the sun. It is, therefore, with pleasure, that we are permitted to offer the following facts.—*Conds.*].

“Until the 11th August, the vines, consisting of Sweetwater, Golden Chasselas, and a few Black Hamburgs, were, both wood and fruit, in a good state. At that period, the mildew appeared on the three *northerly* ranges, consisting of twenty-five vines, on which there are still* over a thousand bunches, although they were thinned in the earlier part of the season of superfluous ones. Lime water had been used, and the usual attention given; but the disease rapidly increased, so that now, on the 3d of October, there is on this lot hardly a single cluster worth gathering. The others are black and shrivelled, the wood also imperfect.

“On what I would distinguish here as the *southerly* ranges, which are in fact, but a continuation of the *northerly* ones, at a little less elevation, there are twenty-nine vines, the fruit of which is *entirely clear*, and mostly well ripened, and the wood perfect. This parcel, shaded by a thick growth of fruit trees, was neglected in other respects, and potatoes were raised immediately about them. It has, however, produced as good grapes as I have seen elsewhere this season, although the quantity is much less than on the north ranges.

“You will also probably recollect an Isabella vine, from one half of which the foliage had been removed on the 15th August. The fruit of the whole is abundant and fine; but no benefit is perceived to result from such a practice. All the vines have a south-west aspect.”—*Yours, W. O., October 4th.*

Singular anomaly in the Cherry Tree.—We have growing at this establishment a Mayduke cherry, grafted about three feet from the ground, which presents the singular anomaly of bearing, without separate inoculation, upon different branches, the same kind of fruit ripening at totally different periods. The Mayduke, it is well known, is one of the earliest cherries, and the majority of the tree produces its fruit at the usual season. A considerable number of the branches, however, bear fruit of the same flavor and quality, but nearly *two weeks later*. The tree is now more

* October 3d.

than twenty years old, and these facts have been noticed in regard to it since the first year of its fruiting—the same branches bearing early and the others late fruit every season successively. A number of trees have been grafted indiscriminately from the tree, and of three which have come to bearing under our notice, two exhibit the same irregularity as the parent, and the other is *entirely late*. We have budded the past season a number of trees from the late branches of the parent tree in order to ascertain if a new variety of the Mayduke may not be produced considerably later than the old.—C. & A. J. Downing, *Botanic Garden and Nursery, Newburgh, N. Y.*

ART. III. Massachusetts Horticultural Society.

Saturday, November 28th.—Exhibited. From M. P. Wilder, a flowering plant of *Camellia japonica* var. *eclipsis*—splendida and *Préssii* of some authors, *Regini galicarum* of some of the French catalogues. This was the first flower of this superb kind that has opened in this vicinity.

From S. Downer, Beurré d'Arenberg, Bezi Vaet, Burgermeester and Bell Catillac pears; Pippin apples. From Benj. Weld, Roxbury, Lewis' pears. From Col. D. Adams, Newbury, seedling pears (a good cooking fruit). From M. H. Ruggles, Phillips pears. From the farm of D. Webster, Marshfield, Tolman's sweeting apples. From C. Newhall, Beurré d'Arenberg pears.

December 5th.—Exhibited. From R. Manning, King of the Pippins, Ribston Pippin, Blenheim Pippin or Blenheim Orange, Winshall's Crab, and Wellington or Dumelow's seedling apples, (all English varieties); Pennock's Red Winter, Bellflower, Cos or Caas, Rhode Island Greening, Beauty of the West, Minister, Mouse, and Rambo or Romanite apples; Fama Gusta apple, from Cyprus; Bezi de Chaumontelle, Glout Morceau, and Beurré d'Harden pont and Passe Colmar pears. From J. Oaks, of Ipswich, Lime or Orange apples; Newton, Spitzemberg and Imperial apples. From M. P. Wilder, a fine apple, the name unknown. From Dr. O. Fiske, Worcester, apples, the name unknown. From L. P. Grosvenor, Chandler apples, received from Connecticut. From Mrs. Jos. Morton, of Milton, Seaver sweeting apples, sometimes called Grafton Winter Sweet. From Bloodgood & Co., Flushing, L. I., Columbia Virgoulouse pears. The following account accompanied the fruit:—

"They are a pear which has lately been introduced to notice, and these sent are very much below their usual size. The original tree is a *seedling*, about fifteen inches in diameter. It is on a farm belonging to Mr. Cusser, in West Chester county, thirteen miles from the city of New York. We saw the tree yesterday, and also saw a graft from the same, four inches in diameter, which produced four bushels of pears this year. These were sold in the New York market for six dollars per bushel."

December 12th.—Exhibited. From E. Vose, Passe Colmar pears. From M. H. Ruggles, a variety called the Border pear. From J. P. Bradlee, apples, the name unknown.

December 19th.—Exhibited. From M. P. Wilder, flowering plants of *Camellia japonica* *eximia* (of the French catalogues), and *élégans* (of the English); the former is a fine flower, color rosy red, with a warratah centre; growth vigorous. *C. élégans* was the true variety as originated by the Messrs. Chandler & Booth.

ART. IV. Quincy Market.

<i>Roots, Tubers, &c.</i>		From	To			From	To
		\$ cts.	\$ cts.			\$ cts.	\$ cts.
Potatoes:				Lima, per cwt.....		2 00	
Common, { per barrel,.....	1 25	1 50		Pumpkins, each,		10	20
{ per bushel,	37½	50					
Chenangoes, { per barrel,.....	1 50	1 75		<i>Pot and Sweet Herbs.</i>			
{ per bushel,.....	50	62½		Parsley, per half peck.....		50	
Eastport, { per barrel,.....	1 50	2 00		Sage, per pound,.....		17	20
{ per bushel,.....	1 00			Marjoram, per bunch,.....		6	12
Sweet potatoes, per bushel,	none.			Savory,.....		6	12
Turnips:				Spearmint,.....		6	
Common, { per barrel,	75	1 00					
{ per bushel,.....	25	37½		<i>Fruits.</i>			
Yellow French, per barrel,..	1 00	1 25		Apples, dessert:			
Onions:				Common, { per barrel,.....	1 50	1 75	
{ per barrel,.....	2 25	2 50		{ per bushel,	62½	75	
Common, { per bushel,.....	75	1 00		{ per barrel,.....	1 75	2 25	
{ per bunch,.....	4	6		Baldwin, { per bushel,.....	1 00	1 12	
White, per bunch,.....	6			{ per barrel,.....	1 75	2 25	
Beets, per bushel,.....	50	75		Russets, { per bushel,.....	87	1 00	
Carrots, per bushel,.....	50	75		Pears:			
Parsnips, per bushel,.....	75			St. Germain, per dozen,.....	1 00	1 50	
Salsify, per bunch,.....	12½			Winter, { per barrel,.....	3 50		
Horseradish, per pound,.....	10	12½		{ per bushel,.....	1 50		
Shallots, per pound,.....	20			Quinces, per bushel,.....	none.		
Garlic, per pound,.....	14			Pine Apples,.....	25	50	
<i>Cabbages, Salads, &c.</i>				Grapes:			
Cabbages: per dozen.				White sweet water, per lb.,	none.		
Savoy,.....	50	75		Malaga, per pound,.....	37½	50	
Drumhead,.....	50	75		Barberries, per bushel,.....	none.		
Red,.....	50	75		Cranberries, per barrel,.....	7 00	7 50	
Brocoli, each.....	37½	75		per bushel,.....	2 50	3 00	
Cauliflower, each,.....	37½	75		{ per box,.....	5 00	7 00	
Celery, per root,.....	10	20		Oranges, { per dozen,.....	37	62	
Lettuce, per head.....	12½			{ per box,.....	4 00	5 00	
Radishes, per bunch,.....	15	20		Lemons, { per hundred,....	1 50	2 00	
Spinach, per peck.....	37½	50		Chestnuts, { per barrel,.....	7 50		
<i>Squashes and Pumpkins.</i>				{ per bushel,.....	2 25	2 75	
Canada crookneck, per cwt.,...	2 00			Walnuts, { per barrel,.....	5 00		
Common crookneck, per cwt.,...	1 00			{ per bushel,.....	2 00		
				Almonds, per pound,.....	12	14	
				Filberts, per pound,.....	4	6	

REMARKS.—Since our last, at which time we stated that the activity of the market was uncommon, we have had such intense cold weather, as to operate immediately upon its productions, and consequently from the cause of many crops being destroyed by the early approach of frost, before they were in, and from the continuance of the severity of the weather, preventing shipments, sales are now dull and heavy, and prices have but slightly advanced. Of potatoes, the stock is now becoming rather short; and, unless warm weather succeeds, it will be quite small; those kinds termed common, have advanced a shade in price; Eastport remain the same. Turnips plenty. Onions are not as plentiful as at the time of our last report, and prices are considerably higher; a larger quantity has been shipped than usual. Many cabbages were froze by the late severe weather, and probably thousands of heads yet remain in the ground covered with snow. Cauliflowers are scarce. Lettuce comes to hand, of fine quality. This week, also, the first radishes of the season were brought in; they were of fine growth, and sold quickly at quotations. Spinach is now plentiful. Of Canada squashes there are very few in market; those fine are in good demand. Apples of all kinds have advanced in price; a few of the Monstrous pippins, not in our quotations, are to be had. St. Germain pears, of which there is probably but a few dozen in the market, have been sold as quoted. Cranberries are very scarce; very large quantities have been shipped the past fall. Chestnuts are in less demand, and prices lower.—*Yours, M. T. Boston, Dec. 21st, 1835.*

ART. V. Obituary Notice.

Died, July 23, William Forsyth, Esq., F. H. S., of Nottingham Place, Marylebone, aged 63 years. Mr. Forsyth was the eldest son of the late royal gardener of that name, known as the author of a *Treatise on the Culture and Management of Fruit Trees*, 4to., 1805, the most popular work of the kind in the first ten years of the present century. Mr. Forsyth, lately deceased, was the author of a *Botanical Nomenclator, &c.*, published in 1794, 8vo; but of no other published work that we are aware of. He was chiefly remarkable for having one of the best horticultural libraries that was, perhaps, ever formed, and for his bibliographical knowledge, more especially in botanical and horticultural literature. He had for many years occupied himself in preparing a *Catalogue Raisonné of Gardening Works*, with biographical notices of their authors; and, had he lived to complete this, it would have formed an interesting chronological and bibliographical history of gardening. Mr. Forsyth had also prepared, some years ago, an *Arboretum Britannicum*, a *Pomarium Britannicum*, and other works which we have seen in MS.; but they have been done so many years, that they are, in a great measure, obsolete. The only manuscript of value which he has left, is his *Catalogue of Authors*; and that, we trust, will be published by his executors.

In the preface to the *Encyclopedia of Gardening*, and also in the historical part of the *Arboretum Britannicum*, we have acknowledged our great obligations to Mr. Forsyth for the use of his library, and for a variety of curious historical information, and corrections of names and dates; and we again desire to acknowledge our obligations to him, at the same time deploring his loss, not only on this account, but as an excellent man, with whom we had been for many years on terms of friendship. Mr. Forsyth was never married, and has left no near relations in England. He was buried in the family vault, in the old burying ground in the parish of Chelsea.—*Gard. Mag.*

ART. VI. Meteorological Notices.

FOR NOVEMBER.

THE month of November, with the exception of the last week, was uncommonly fine, and pleasant. The days were accompanied with almost a continual sunshine, until the 22d inst., when a snow storm set in, which covered the ground to the depth of four or five inches. Previous to this, the prevailing winds were southerly, and very light. The first frost of the season, which killed dahlias and most of the half hardy annuals, was on the morning of the 1st inst. The weather continued so fine that few were prepared for the early setting in of the winter, and many plants undoubtedly remain uncovered, except with snow.

THERMOMETER.—Mean temperature, 34° 31'—highest 62°; lowest 5° above zero.

WINDS.—N. four days—N. E. three days—E. one—S. E. one—S. seven—S. W. three—W. nine—N. W. two days.

Force of the Wind.—Brisk, eleven days—light, nineteen days.

Character of the Weather.—FINE, twelve days—FAIR, five—CLOUDY, thirteen.

Rainy, two—Showery, one—Snowy three days.

Depth of Snow—inches 6 70-100.

MONTHLY CALENDAR
OF
HORTICULTURE AND FLORICULTURE,
FOR JANUARY.

FRUIT DEPARTMENT.

Grape Vines in green-houses and graperies, that have not yet been pruned, the present opportunity may be taken for the purpose. Cut away all small weak wood, leaving the shoots at good distance, that the sun may penetrate to the green-house plants on the stages, when the vines begin to start in the spring. Be careful and not leave too much length of wood, as nothing is so injurious, particularly to young vines, as overbearing them with fruit.

Strawberry Plants in pots may be now taken into the green-house, if the advantage of a stove can be had, they may be much forwarded in their fruiting by removing them into it after the fruit is set ; give them a good supply of water.

Grape Eyes or Cuttings may be put into the hot-bed this month and their growth much forwarded; they should be put singly into number one pots.

FLOWER DEPARTMENT.

Camellias will now be rapidly swelling their flower buds, and will require considerable water.

Geraniums which were potted into number one pots in the fall, will now require to be shifted into the second size.

Calceolarias, which were raised from seed or cuttings, will now require repotting.

Roses should now have a good supply of water, and those that are tall and straggling, headed down or trimmed of small superfluous branches.

Mignonette and ten-weekstocks now sown in the green-house, will make fine plants to flower in the open garden in May.

Schizanthuses of the different species and varieties, should be repotted, being careful to put them in a very light rich soil.

Ranunculuses that were not planted in the fall, from the early setting in of the cold weather, will flower fine if planted this month in frames, and protected from frost. The seed should be sown this month in shallow pans or boxes and placed in the frame or green-house.

Polyanthus and Auricula seed should now be sown in shallow pans or boxes, and placed in the green-house.

Tuberoses, Jacobean lilies, and *Tiger flowers* may be brought forward in hot-beds.

Dahlia seed sown in the latter end of the month in the hot-bed, and the plants shifted two or three times until May, will produce their flowers in August. Where plants are wanted to bloom very early, the old roots should now be laid in a hot-bed, and when the young shoots are an inch long, the tubers should be parted, and placed into number two pots.

Young Plants of Lobelia fulgens and splendens should be placed in the hot-bed, if wanted to flower strong and beautiful. Vol. I, p. 56.

THE
AMERICAN
GARDENER'S MAGAZINE.
FEBRUARY, 1836.

ORIGINAL COMMUNICATIONS.

ART. I. *Observations on the Dahlia its Species and Varieties.*
By JOHN LEWIS RUSSELL, Professor of Botany and Vegetable Physiology to the Mass. Hort. Soc.

THE surpassing beauty and brilliancy of the dahlia has raised it, in the estimation of the floral taste, whether considered in its single unadorned simplicity, or when brought to the acme of perfection by the ingenious labors of the horticulturist. Scarcely unrivaled by the unique elegance of the camellia, it has become, like that remarkably transmuted plant, as universal a favorite among the curious and wealthy; and still more a companion of the antique and venerable accompaniments of the cottage garden or the village flower-bed, of some humble admirer of nature's sportive wonders, such as may be found in every community, and not by any means few in our own, happy, smiling New England. Perhaps the moral and mental improvement of a people cannot be better estimated, surely not better promoted, than in the observation and introduction of the spirit of the love of the more elegant and refined occupations attendant on agricultural pursuits. For my own part, I want no better proof of a feeling and exquisitely sensible mind, even under a rough and rude exterior, than may be observed in a love of nature, particularly that which relates to the care of flowers. A rose-bush, a honeysuckle, a pæony—famed in village love for pharmaceutic worth—a lilac-bush, or even a huge tuft of the singularly striped "ribbon grass," preserved by some rustic enclosure from the trespass of those sober, useful, though less intelligent, tenants of the farm-yard,

whose tastes are more alimentary than mental—all denote a higher order of mind, in some tidy housewife, or younger female ; and when I discover the highly patronized dahlia, lifting its rich blossoms among the associates of its new and strange locality, to me it proves the gradual development of a purity of taste and feeling, which, though not incongruous, is not always to be expected in such scenes. From the elevated sandy meadows of Mexico, where, scarce half a century since, they were probably first known, and shortly after, were transferred from the Mexican Botanic Garden, the species, and almost innumerable varieties have extended with a greater rapidity and more accompanied admiration over the civilized world, than perhaps any other vegetable. The rich alluvial soils of the south, and the hard rocky lands of the north, are adorned with their cultivation ; and with a singular accommodation to circumstances, they evince scarce a preference in the expansion of their blossoms, for one section than for another. It is presumable, however, that heat is injurious to the perfection of their flowers,—a defect which might be obviated in a great degree by application of more moisture. Naturalization or acclimation cannot speedily, if at all, be expected in our northern latitudes, unless occasionally accidental escape from the effects of frost be deemed such, which has been known in this vicinity in several instances ; and a case was mentioned of a root exposed to the winters of several years, protected entirely by the early and deep snows so common in the mountainous regions of New Hampshire. In the Azores, they are lifted out of the soil at the approach of the winter season, and left exposed on the surface till the returning spring, undoubtedly with the view to give a temporary repose, and secure a greater amount of flowers.

So much has been said and written on the subject of my present remarks, that I can scarcely be expected to offer any thing new ; and it is only with the design of presenting your Magazine with a succinct account of the early history and rapid progress of this superb flower, together with whatever observations may suggest themselves, that I undertake the task. Mr. Joseph Sabine, in the third volume of the “Transactions of the Hort. Soc. in London,” has drawn up a very able and exceedingly interesting article, embracing all that was known at that time (1818) ; but as it may not be easily available to many of your readers interested in the subject, I shall consider it a sufficient excuse to pursue my intentions.

“The dahlia,” says Count Lelieur, “was originally from Mexico, and introduced into Europe in 1789.”—“From the Botanic Garden at Mexico, it was sent to that of Madrid,

where it flowered for the first time in 1791." Cavanille (an ecclesiastic and eminent botanist) dedicated the genus to Dahl, a Swedish botanist, a disciple of Linnè, and the author of a work on his "*Systema Vegetabilium*." "In the same year (1791), he gave the description of three varieties sent from Mexico, which he considered as three *species*, constituting the genus *Dahlia*, viz., *pinnata*, *rosea* and *coccinea*" (*Memoire sur le Dahlia*, &c. pp. 3—4). In the number for March, 1835, of this Magazine (Vol. I, p. 114), some observations were made on the restoration of the old name of the genus, given by Cavanille, and altered from erroneous impressions of its being already appropriated, strengthened by a similarity of sound to *Dalea*, belonging to an entirely different natural order and artificial class. Willdenow, in his *Species Plantarum*, applied that of *Georgina*, after Georgi, an eminent Russian botanist, and De Candolle adopted it, apparently on such authority. With a similar desire of imitation, or the universal mania after new names, the florists of this country were fast falling into the supposed *improvement*, regardless of the untenableness of one averred objection, and the gross impropriety of violating that rule of every scientific nomenclature,—that the original name should be sacredly preserved, to the exclusion of every other, unless founded on *good and substantial reasons* of real physiological difference. It was with unfeigned pleasure that I therefore hailed the restoration of *Dahlia*, and trust that the disciples of the illustrious star of northern Europe shall confer honor, and shed some reflected glory on the plant, which was dedicated to his fame and memory.

In the third volume of the "*Annales du Museum*," we find a memoir on the *Dahlia*, by M. Thouin, accompanied by a colored plate of three varieties, viz., *rosea*, *purpurea* and *coccinea*, probably answering, at least in color, to the three species of Cavanille,—*rosea*, *pinnata* and *coccinea*. M. Thouin remarks that *rosea* was of the size of *Aster chinensis* L.; and from the plate, it seems to resemble a prototype of "*Queen of Naples*," a somewhat old variety. One of these varieties is figured with semidouble flowers,—a fact not a little remarkable, as this plate was issued in 1804, and Count Lelieur mentions that not until 1817 could he obtain even two or three double varieties; about the same time, indeed, that the Dutch florists began to procure theirs from seed. A similar curious fact was observed in the difference of seed raised at Anteuil and St. Cloud, the richer soil producing only pure and simple flowers, whereas the thinner and lighter soils of the former place was only prone to produce the seeds of double varieties—accounted for on the philosophical principle, that it was a greater effort to pro-

duce a perfect seed than an imperfect one ; that is, one capable of continuing an accidental and physiologically considered monstrous development of petals instead of stamens.

After several attempts to reduce to species the different varieties of this flower, each botanist and cultivator adopting some trifling character, founded on the form of the leaves, or color of the flower, De Candolle discovered that the essential distinctions consisted in the absence or presence of fertile florets in the ray, and termed, in the second edition of *Hortus Kewensis*, *superflua* and *frustranea*. Mr. Sabine reduces under the two following species of De Candolle the several synonyms, as quoted from the *Hortus Kewensis* :

1. *Dahlia superflua*, caule non pruinoso, flosculis radii fœmineis.

2. *Dahlia frustranea*, caule pruinoso, flosculis radii neutris. (*Hort. Kew.*, ed. 2, Vol. v, pp. 87—88.)

By this arrangement it will be perceived that two species are formed, the first with "smooth stem, and fertile florets in the ray;" and the second with a pubescent or "hoary stem, and barren florets in the ray."

How far this arrangement has been observed, I have little means of determining. Loudon, in his *Hortus Britannicus*, gives a catalogue of sixty varieties of *D. superflua*, and only five of *frustranea*. But even with the characteristic differences which Sabine lays down, as to the coarseness of foliage and diffuseness of habit in *superflua*, and the delicacy, compactness and erect manner of growth in *frustranea*, I very much doubt whether in this country it would be easy to detect the species in the astonishing varieties of our gardens. It is almost certain that color would afford no test, although the original color was referable to purple in the former, and that of orange or scarlet in the latter. Still more uncertain the downiness or pubescence of the stems, which, though more or less observable in all, does not seem to constitute a permanent character. A series of experiments should be instituted, in order to endeavor to trace any observance of this specific difference of De Candolle, in the seedlings of our double varieties ; and also whether, in this instance, unobserved, a real hybridizing process has not taken place between the two supposed genuine species.

It may be deemed presumptuous to seemingly question the authority of such celebrated names ; but it must appear an important, and surely therefore a harmless inquiry, especially when we consider the tendency to confusion in such a myriad host of abnormal individuals, as our catalogues of the varieties of dahlias present. I trust, therefore, to the candor of discriminating minds, that nothing but a deep interest in the cause of scientific truth could for a moment

prompt such an inquiry. Such a theory has been conceived before, from the failure of the Genevan botanist's characters, as also from other circumstances, which render it a still more interesting query; and at no better time could it be settled, unless it has already been done, than now, in the height of the universal popularity and general admiration which the subject of it obtains, as an ornament of our gardens and parterres.

It is a curious subject for reflection on the changes effected in horticulture, to be able to trace the opinions of learned men, founded in sound reason and observation, taking, for a moment, the situation they occupied, and casting a glance forward to our own experience and knowledge, which confirms or disproves their theories. Thus De Candolle foretold the improbability of the occurrence of a blue variety, and we have almost every combined shade and primitive color of the prismatic bow, excepting that Mr. Sabine tells us of the existence of a double white, which he feels inclined to doubt, and now "Kings" and "Queens," there are of double white, and even "Mountains of snow," and beauties of antiquity, unrivaled only by the elegance or purity of these fragile flowers; the grandeur of an avalanche exhibited in a petal, and the winning loveliness of female character shining forth in an abortive stamen.

But, with all the attractions of great and good and illustrious names, and the wondrous transmutations of floral skill—for wondrous they truly are—the simple, unadorned elegance of a fine single flower, with its eight perfectly formed petals and golden centre, expanding gradually into the florets of the disk, presents to my ideas a lovely work of nature's skill. Surely it is a mistake to exclude from our collections these primitive forms, to give place to double varieties only; and during the last season, one such has actually insinuated itself, of however only tolerable merit, more it may be suspected from its royal title or foreign origin, than from any returning taste to floral simplicity.

The dahlia, like many other cultivated plants, seems very prone to sportiveness or variation in the tints and pencilings of its petals. Cultivators begin to recommend the use of strong and nutritive manures in producing very fine flowers, an opinion entirely counter to one formerly entertained and practised upon,—that of planting in poor and meagre soils. Undoubtedly the former practice is the better one, and added to this, the fact, that but a moderate degree of sun and heat is necessary to their increase, there can be no reason why the multiplication of flowers is not almost wholly at the disposal of the grower. The natural localities have been discovered to consist of sandy mountainous meadows, of 48 to

5400 feet above the level of the sea. A sandy meadow, in such a situation, may not be a poor or meagre soil ; on the contrary, it is most probably a very rich one, being composed of the alluvial deposit of the decomposition, both mineral and vegetable of the upper regions. It is certain that the effect of poor soil on the plant is to weaken the tendency to produce rich flowers, by the poverty of its entire growth, and that, when liberally supplied with suitable food and sufficient moisture, nothing can surpass the exuberance of its blooms.

The value of the dahlia seems confined to its intrinsic beauty and hardiness, as an ornamental plant. Many futile attempts have been made to introduce it among the esculent roots ; but it would require a savage appetite, or a love for novelty, to bring this about. Its tubes, nevertheless, abound in farina, but the supposed presence of benzoic acid destroys their palatableness. The *Compósitæ*, in their general characters, though of great importance to mankind in their medical properties, offer few articles of nutritious food. The tubes of the tuberous sunflower, improperly and commonly called "Jerusalem artichoke," are indeed considered by some as delicate food, and the disk of the genuine artichoke is used in some countries extensively as an accompaniment to the table.

Every season brings to the dahlia some new insect foe, which attacks its valuable and tender buds, or devastates its foliage. The grasshopper (a common green species) and the *Syrts erosa*, with *Membracis bubalus*, better known to the unscientific as a two-horned triangular bug, has been peculiarly busy for a few seasons past. While some unknown pest, of a green and smooth larva, luxuriously riots on the rich petals, or undermines the leaves. A small dipterous (?) insect was also observed for the first time this year, but I was unable to detect any such new depredator. Nothing but a careful examination and diligent use of the fingers in seizing and crushing the intruders, with perhaps some liquid application to the roots, which should promote a more speedy and vigorous growth, is a preventive. It is to be hoped attention will be paid to this view of the subject, that some method may fortunately be devised to save from disappointment the promised glories of our finest and rarest plants, or at least that these insidious mischief workers may be known and exposed.

I conclude this article with only one question to the experimental florist, viz., whether sufficient experiment has been made, as to soil or exposure, to insure the perfection of bloom in that rich and superb variety "Levick's Incomparable?" Every one who attended the last annual exhibition

of the Massachusetts Horticultural Society, must remember a remarkable specimen, which graced the magnificent display of its sister varieties, and which was produced in the immediate vicinity.

Yours,

JOHN LEWIS RUSSELL.

Salem, Jan. 1, 1836.

ART. II. *On the Forcing of the Strawberry.* By E. SAYERS, Newark, New Jersey.

THE high estimation in which the *Fragària*, or strawberry (as its name imports, from the very apparent qualities it possesses as a superior table fruit), has been held for many years, render it needless, in this place, to bestow any encomiums on its recommendation; as a table fruit, it may be considered of the first order, and in the confectionary department it is used in various ways, as creams, jams and jellies. To these may be said that it is of a very wholesome quality, and recommended by the faculty, in many cases of sickness, in their catalogue of pleasant remedies, in which it is said to dissolve the tartareous incrustations on the teeth, promote perspiration, and sweeten the breath.

Class and Order. According to the Linnæan system, it belongs to the twelfth class, *Icosándria*, having many stamens or male parts attached to the calyx; and the order *Polygynia*, having more than ten stiles or stigmas.

Species. The species are numerous and undetermined, and are found to be natives of Britain, France, North and South America, India, and other parts of the world.

The varieties are very numerous, and daily increasing, by crossing them by means of impregnation, by which many very fine varieties have been obtained, as Keen's seedling, Bostock, Wilmot's superb, &c. &c.

PROPAGATING THE STRAWBERRY FOR FORCING.

Rooting the Plants. The method mostly adopted, and which, I think, most recommendable, is, to plant out some stools purposely, either in the spring or fall, on a rich plot of ground, in a western aspect. They may be planted three feet apart, and the ground well worked between them by digging in the spring and summer. When the flower trusses or stems begin to show, they should be nipped off,

between the finger and thumb, which will strengthen the plants, and cause them to send out runners early ; when the runners begin to grow, they are to be laid out in a regular manner, that the young plants may have a free circulation of air, and receive the sun. As the principal object is to obtain early plants, they may be greatly facilitated, by laying the joints, as they protrude from the plant ; and if a quantity of well-rotted manure is occasionally thrown over them, the better : water may also be applied, to aid their early rooting, which is one grand object, in order to forward the plants in a vigorous, healthy, manner.

Potting the Plants. When a portion of the plants are thus rooted, they are to be potted in the following manner : A quantity of pots may be procured of the following dimensions : six inches deep, and about the same in diameter on the top [No. 4], which may be filled with compost before or after plunging.

Compost. The compost that I can best recommend, is two thirds of good sandy loam, and one third of leaf mould and horse manure, of equal quantity ; this should be procured three months before planting, and well mixed and incorporated together, with which the pots are to be filled, previous to planting.

Plunging the Pots. A situation for plunging the pots should be chosen in a western aspect, where the sun does not have its full influence, but where a free circulation of air can be obtained in every direction. The spot of ground being selected, prepare it for plunging the pots, by laying out beds three or four feet wide, or in such a manner as to admit of four, six or eight rows of pots in the bed across : the length may be in proportion to the quantity required. The bed may be laid out by marking with a spade, by a line each side, when the earth is to be taken out to the depth of the pots, that their rims may be even with the surface of the ground. The pots are then to be placed in a regular manner in the bed, and filled (if not done before plunging) with the prepared compost ; and, in such case, the vacancies between them will require to be filled with the earth taken from the bed, which is the most economical method, if the compost is not plentiful : on the other hand, the filling of the whole, when the pots are plunged, is the most ready method ; therefore the choice of the best method must depend on circumstances. The pots being filled, the whole of the bed is to be well watered, to settle the earth in the pots ; and in the evening (which is the best time), the plants are to be dibbled into the pots.

Planting the Strawberry. The young plants are to be taken from the vines, and dressed in the usual way, by shortening the roots, and taking off the dead leaves.

The plants are to be inserted in the pots with a dibble, in the usual method of planting, one, two or three in a pot. The number to be inserted depends on the time and strength of the plants, the object being to fill the pot with roots and a good crown, before wintering the plants; therefore in early planting, one in the centre of the pot, is best for the strong growing varieties, as Keen's seedling, Wilmot's superb, and the like; and two plants in a pot of the smaller varieties, as the Early scarlet, Roseberry, and so on. In late setting out, they may be put accordingly thick, as two plants of the larger varieties, and three of the smaller in a triangular manner. When they are thus planted, they will require a good watering every evening, until their roots begin to be well established, when they may have every attention, to render them vigorous plants; and in the month of October, if one or two waterings of manure water are applied, they will be greatly benefited, in the process of forcing, by the soil in which they grow being of a richer quality.

Shading the plants is, by many, recommended, and in many cases, perhaps, very judiciously, although I must precaution the young forcer that it weakens the plants, and therefore should be as much as possible evaded.

Protecting the Plants in the Winter. When the winter commences, the pots are to be taken from the beds, and protected in cold frames, pits, sheds, or the like, in such a manner that they will not be too severely frozen, which will not only break the pots, but also injure the plants.

OPERATION OF FORCING THE STRAWBERRY.

Before I proceed to detail the manner of forcing the strawberry, it will be proper to make a few cursory remarks on the subject. The strawberry, in all cases of forcing, requires to be placed near the glass, in its first stage particularly. The process, at the first commencement, requires a very moderate temperature. The plants, when in bloom, need much water; but care must be taken not to wet the flowers. Shading is also requisite to the plants, when in flower, from eleven to one o'clock of every sunny day. At the time of swelling and ripening the fruit, air and heat are also requisite, in order to forward and give it color and flavor. In contradiction to the above remarks, if the strawberry is placed far from the glass, it will grow slender, and throw up but few trusses of flowers, and those weak and puny. Rapid forcing at the first commencement, will produce the same effect; keeping the pots dry when the plants are in flower, retards and destroys the blossoms from setting their fruit; and wetting the blossoms, in the act of watering

the plants, destroys the pollen, and blinds the flower. Lastly, if the sun is admitted to the flowers at mid-day, with its full power, they will be blinded by its influence in a confined state, and hence the necessity of shading.

Operation of Forcing. The strawberry is forced either in frames, pits or houses. Frames are perhaps too troublesome to become generally in use for the purpose, and houses too expensive for their culture, with the exception of large establishments, where they are moved from one house to another, as from the cherry house to the pinery, &c. But the most economical, as well as the best adapted method that I am acquainted with, in the forcing of the strawberry, is forcing them in pits, and which can be easily converted into frame or house culture, by any intelligent person. The pits may be of any dimensions, from three to ten feet wide in the clear, and, for this purpose, it may be worked with flues, in the usual method of forcing-houses, or partly by bottom heat, from manure and tan, and partly by flues. The first method requires a flue to run round the front and ends of the pit. The staging must be erected under the glass, at the distance of about a foot or eighteen inches from it, on which the pots of strawberries are to be placed and forced.

But the system that I can best recommend, is to force the strawberry in a pit, with a flue in the front, and a quantity of leaves and manure worked in a moderate temperature of heat; on the top of this, about two feet thick of old tan may be added, into which the pots are to be plunged to the rims. Having the pit prepared, by putting in the manure, the tan is then to be laid on to within eighteen inches or two feet of the glass; the pots are to be plunged therein to the rim, when the heat becomes moderate, which requires great precaution, or the plants will run up in a slender manner. At the first commencement of forcing, the pit should have plenty of air during the day, and the temperature through the night may be kept from 35° to 40°, fire heat, and through the day to 45° or 50°. This heat may be gradually increased from 40° to 45° during the night, and 50° to 60° during the day, with plenty of air. The plants may be gradually watered, and every means used to bring them on in a strong healthy manner; when they begin to throw up their trusses of flower stems, plenty of water must be applied, and air, as much as possible, be admitted to the flowers as they open. The temperature may be at this time kept as near as possible to 50° through the night, and 60° through the day, with plenty of air. The plants will be benefited, if, at this time, they are divested of some of their leaves, which will give strength to the blossoms.

In the middle of the day the pit will require to be shaded, when the sun shines, from eleven to one o'clock: this is more essentially necessary to the strawberry than any fruit I am acquainted with: the sun shining powerfully, as before observed, on the blossoms, when in a confined heat, often blinds or destroys the female part of the flower, which is the cause of blindness or barrenness.

Swelling the Fruit. When the fruit is perfected, and beginning to swell, the shading may then be omitted; and the plants will require to be well watered whenever the earth becomes the least dry.

The temperature of the pit may at this time be kept as near as possible from 50° to 55°, fire heat, during the night, and from 60° to 75°, with sun heat, and plenty of air, during the day.

Ripening the Fruit. When the fruit is nearly swollen to its proper size, the watering may then be in a measure suspended; and the pots may be removed into the stove, pinery, or any warm situation, to forward its ripening, as the strawberry will bear almost any heat, when the fruit is properly set; but in all cases, the pots should be so placed as to obtain the full influence of the sun, in order to give flavor to the fruit; when it is fully ripe, some pots may be taken to table with it on, which has a very pretty effect, besides a very nice dessert. When it is all gathered, the pots of plants may be set out to obtain a fall crop, or for a new intended plantation, which see, under the head of *Propagation of the Strawberry*.

The strawberry requires to be potted every year from young plants, as the old stools do not force well.

Yours, EDWARD SAYERS.

Newark, N. J., Dec. 23, 1835.

ART. III. *On the Propagation and Management of the Erythrina Crista galli.* By JAPHET.

GENTLEMEN:

THE season will soon be at hand, when the gardener will be busily engaged in propagating his dahlias; however, I do not intend to trouble your readers on this subject, as it has been very ably handled by one of your correspondents already. The subject I am about to treat of, is, the propa-

gation and cultivation of the *Erythrina Crista-galli*. In my opinion, the more the cultivation of a plant or plants is known, so much the better for the cultivator; because there are but few people that will purchase a plant the management of which they know nothing at all about. I am also of opinion that the more this knowledge is extended, the greater the taste becomes; and, as the taste increases for plants, their value increases in the same proportion. Now who would be without a plant of the *Erythrina Crista-galli*? perhaps few of your readers are aware that there is as little trouble attending the growth of this beautiful plant, as there is with that of a dahlia, and which, I hope, I shall be able to show, if I can make myself rightly understood.

About the latter end of February, or the beginning of March, I pot the old plants in a very rich light soil, giving them a good watering, to settle the earth about their roots. I then place them in any convenient part of the hot-house, and, in two or three weeks from this time, they will have made shoots from four to five inches, which is sufficiently long enough for cuttings. Observe how many cuttings you have ready to take off; but, before taking them off, you must have as many three inch pots [No. 1] in readiness to receive them, as they should not lie any length of time after being separated from the parent stem: the shoots being young and full of sap, they soon flag, and once flagged, it is ten chances to one if ever you are able to recover them.

The soil which I prefer is one half leaf mould, and one half pure pit or river sand. The above sized pots being filled with this compost, I take a small piece of round wood, or, which is more handy, the point of my finger, and make a hole in the centre of the soil in the pot. This I fill with pure sand: I then proceed to take off my cuttings, observing to cut them close below a joint or eye, allowing all their leaves to remain. I then take a piece of round wood, and make a hole in the centre of the sand, to the depth of one inch and a half, placing the cutting therein; and with my two thumbs, I press the soil as firm as possible, this being the principal secret of putting in cuttings. I then place them in a hot-bed, which has been made up a few days previous. Observe never to allow the bottom heat to get below 70°; it can very easily be kept up to this by putting fresh linings around the frame. I would observe that they will not be at all injured, if a little steam should get into the frame, providing it is not too strong. Great care is also necessary to keep them shaded from the sun, as also to sprinkle them, every morning, with water of the same temperature of the bed, if need require, and never at any time to give air, except when at work in or about the frame.

In the course of three or four weeks, the plants will be sufficiently rooted to bear removing to the hot-house, placing them in the shade as much as possible for two or three days, and exposing them gradually to the sun and air. In the course of two or three weeks further time, they will require to be shifted into five inch pots [No. 3], and in which they should remain, either for sale, or until the weather will admit of their being planted out in the open border.

The proper time for this is about the latter end of May, or beginning of June; the ground they are to be planted in should be a mellow, light, rich earth; and, as to situation, I should prefer the south border, where they will be sheltered from the north wind. They will require to be planted two feet apart each way. This done, you are at no more trouble with them (except tying them up when required), until the approach of frost. They should then be cut down, and the roots dug up in the same manner as those of the dahlia, and placed away in any convenient part of the greenhouse, covering them with a little mould, and in this state allow them to remain during the winter. Yours,

Wilmington, S. C., Dec. 23, 1835.

JAPHET.

The *Erythina Crista gálí* is a plant almost wholly unknown in this neighborhood. A species of this genus, in Mr. Lowell's collection, supposed *E. picta*, is the only one we have observed in flower here. In New York and Philadelphia, it is frequently to be met with in great splendor. We hope the above excellent remarks will be the means of directing attention to this plant; and if a supposition that it is difficult to manage, has been the reason of its being so neglected, we hope that the ease with which our correspondent states it can be grown, will dispel such an error, and induce every amateur and gardener to possess a plant. Its terminal racemes of coral-colored papilionaceous flowers have a most gorgeous appearance, either in the hot-house or open border. *E. picta* (?), which has flowered every season at Broomley Vale, planted out upon the border, in front of the hot-house, is well known for its beauty; but it is much inferior to *E. Crista gálí*.—*Conds.*

ART. IV. *On the neglected State of Cottage Gardens, with Hints for their Improvement.* By R. MURRAY.

O, who that loves with curious eyes to trace
Nature's least beauty, or most transient grace,
Can walk a garden's cultivated ground,
At morn, when flowers their fragrance breathe around,

Nor feel, as he inhales the balmy air,
 And views the world of loveliness that's there,
 His genius and his taste grow more refined,
 And fancy's vista open to his mind ?

[The name of the author of the above lines is not known to your correspondent.]

GENTLEMEN :

IN this free and happy country, where every man's person and property are protected, why is the cottage garden neglected? I was in hopes, after your valuable Magazine was commenced, an immediate impulse would be given to all classes of citizens, to cultivate and improve, to the best advantage, the small spots of ground connected with cottages ; but another year has been suffered to roll on without any change taking place. Wherever you take your walk, you will see numbers of beautiful cottages, with miserable appendages ; yes, so much so, that the small spots of ground in front are so thickly covered with weeds, that you can scarcely gain admittance, without wetting your feet in damp weather ; whereas, if those spots of ground were cultivated with economy, they might yield wholesome food, and a cooling shade for the inmates, and, as your correspondent *Junius* observes, would give "additional value to property." It likewise creates an attachment to home, and encourages sober and industrious habits in all the members of a family. It would likewise give them an opportunity to display their taste and skill in floriculture. It is well known that there are many tradesmen and manufacturers in Great Britain that excel professional gardeners in growing florists' flowers, such as the carnation pink, polyanthus, &c.; and might not men in the same sphere of life in this country, where property is more equally distributed, not excel in the same flowers, if they would make the trial ? Allowing the trial to be made, the next step to improvement is to establish a society for competition, and let the productions for the year's competition be made known to the members every last meeting of the year. They should by all means guard against giving their prizes in money : a piece of plate, whatever the value may be, will be found to give a greater stimulus to others to form themselves into societies for the same purpose. It has likewise the tendency to keep alive the same taste in the offspring, and perpetuate the memory of the deceased parent ; and, in a very short time, you would find societies for the same purpose established in every village throughout the country. But I must remind you of one great impediment to the general cultivation of cottage gardens, which your correspondent *Junius* seems to have overlooked,—this is, the *long hours* that the laborer has to work, which, you must allow, deprives him of one mo-

ment's time to cultivate his little garden, however desirous he may be to do so, without encroaching on the sanctity of the Sabbath. But this is an evil that can be easily remedied, if gentlemen, that are anxious for the spread of horticulture, and the beautifying of the country, will allow those men in their employ, that may be possessed of a garden, two or three hours in the week to cultivate them; such men would not only be friends to humanity, but patrons of art and science; for I am sure that such a slight sacrifice as I have mentioned, would be amply compensated to the wealthy class of citizens, in having the privilege of visiting the numerous cottage gardens that would be found wherever they would choose to take their walk. The mere anticipation of seeing the intelligent mother instructing her children under the honeysuckle bower, and the industrious father engaged cleaning and tying up his bed of florists' flowers, would give a degree of pleasure to the evening's recreation, that at present they have no conception of.

Yours, &c., ROBT. MURRAY.

Waltham, Dec. 24, 1835.

ART. V. *Beautiful Plants growing wild in the Vicinity of Boston.*
By E. B. KENRICK, Watertown.

(Continued from page 17.)

All these plants are perennial, unless intimation is given to the contrary.

CLEMATIS.

Clématis verticillàris Dec. *Atragène americana* Sims. False Virgin's Bower. An elegant, climbing, woody vine, with large flowers. The stem is six angled, and gives off opposite axillary buds, out of each of which proceed two leaves, and a fine purple flower. The leaves are each of them ternate, or in threes, like clover; and they climb by the convolutions of their stems. Leaflets heart-shaped, nearly whole, and even on the margin. Petals four, acute, oblong-egg-shaped, eyelashed, and an inch or more in length. Seeds crowned with hairs, not plumose.—Mountains; Brooklyn, Connecticut, and in Vermont.—May, June.

Clématis virginiana L. Traveller's Joy, Virginian Virgin's Bower. A hardy, climbing, woody vine. It is a general

favorite, and may be easily trained so as to form delightful bowers and festoons. It gives off, at intervals a pair of opposite leaf stems, which twine around objects of support, serving the purpose of tendrils; each stem bearing three heart-shaped leaflets, variously toothed, and lobed. The flower stems grow out of the shoulders of the leaves, and bear clusters of white, sweet-scented blossoms. The most remarkable and showy appearance of this plant, is when in fruit; the long, feathery, curly crowns of the seeds appearing almost like tufts of wool. Sometimes the cultivated plant does not produce these curly crowns; the Virginian virgin's bower therefore has a claim over its sister species.—Low grounds; very abundant on the banks of Neponset river, Milton.—July, August.

CLETHRA.

Clethra alnifolia Alder-leaved Clethra. An elegant plant, forming a bush from four to eight feet high. Leaves alternate, about three inches long, and from one to two broad, wedge-formed, or inverted egg-shaped, acute, coarsely saw-toothed, smooth and green on both sides. Flowers small, white, lilac-scented, with a five-leaved calyx, and five roundish oblong petals, disposed in a spike-formed raceme.—Low, damp or wet soils; Cambridgeport, &c.—July, August.

CORNUS.

Plants of this genus have a four-toothed calyx; a four-petaled corolla proceeding from the upper part of the germ; likewise a fleshy drupe or fruit, with a two-celled nut or stone, commonly termed a *berry*.

Cornus alba L. White-berried Cornel. A shrub, sometimes growing about ten feet high, with smooth, slender, spreading, reddish branches. Leaves ovate or egg-formed, broad, acute, hoary underneath. Flowers white, in cymes, the flower-stalks, like those of elder, radiating from one centre, but afterwards being subdivided variously. The fruit is bluish white. In rich ground, the plant sometimes blossoms twice in a year.—Low, damp grounds; Roxbury, Cambridge, Newton, &c.—June.

Cornus alternifolia l'Herit. Alternate-leaved Cornel, sometimes called Osier. A showy, handsome shrub, sometimes eighteen feet high, but commonly much lower. The branches are warty, very spreading and wavy, forming a flattish, umbrella-shaped head. Leaves ovate, sharp-pointed, whitish beneath, and either alternate, or standing about the twigs without order. Flowers white, in clusters, with flattish tops or cymes. Fruit or berries purple.—Swamps, shady woods; near Nonantum Hill, Newton.—June.

Cornus circinata l'Herit. Broad-leaved Cornel. An erect,

slender shrub, from six to eight feet high, bearing handsome bunches of flowers. It is distinguished by its warty or spotted branches, and especially by its large, rounded, or broad-oval, long-pointed leaves, white-downy beneath. Flowers white, in flattish-topped cymes or elder-like clusters. Fruit bluish.—Woods, banks of rivers; Newton, Brighton.—June.

Cornus florida Red Osier, False Box. A conspicuous and very ornamental woody plant, in size between a shrub and a tree; covered early in June with a profusion of white flowers, appearing, at a distant view, like large single roses. It is extremely regular in its manner of branching. The branches are smooth, and have reddish bark, marked with rings at the places of the former leaves. The proper flowers are minute and obscure, growing out of the centre of an involucre, which is apt to be mistaken for a proper corolla. This involucre consists of four large white leaves, like petals, obovate or inverted egg-formed, and appearing somewhat heart-shaped. The fruit is a glossy, scarlet, berry-looking drupe, containing two seeds.—Woods; commonly, perhaps, in moist stony ground. Dedham and Quincy; also, in the woods north of Newton Theological Seminary.—June.

Cornus paniculata PHerit. Panicked Cornel. A shrub about six feet high, with erect branches, dotted, or specked. Leaves hairless, ovate, long-pointed, hoary beneath, small for the genus. Calyx very minute, scarcely perceptible. Flowers white, in many clusters, and being a more or less oblong cyme, or rather cymose panicle, shaped like a bunch of lilacs. Berries, white, globular, a little flattened.—Low or swampy grounds; Newton.—June, July.

Cornus sanguinea Bloody Cornel. A very showy species, from eight to twelve feet high, with straight branches, of a blood color. Leaves rather pubescent, pale beneath, broad, ovate. Flowers white, in spreading cymose clusters. Anthers yellow, showy. Berries brown (?).—Around lakes; New York, &c.—June, July.

DIERVILLA.

Diervilla Tournefortii, *Lonicera Diervilla* L. Yellow Diervilla, Bush Honeysuckle. A shrub from two to three feet high. Leaves opposite, smooth, on short stems, ovate, notched on the rim, and terminating in a long-drawn sharp point. Calyx oblong with five segments or divisions. Corolla yellow, funnel-shaped, twice as long as the calyx, and having five roundish, unequal segments. The flowers grow in the shoulders of the upper leaves.—Rocky woods; Cambridge, Newton, &c.—June, July. Yours,

Watertown, December, 1835.

E. B. KENRICK.

(To be continued.)

ART. VI. *On the necessary Treatment of Euphorbia Poinsettii.*
By P. Q., Philadelphia.

GENTLEMEN :

THIS euphorbia, which was introduced in 1828, from Mexico, by Mr. Poinsett, should be extensively cultivated in every choice collection of plants. It was known by the name of heterophylla, for some time, till its true character became better known. Hence the name, in honor of Mr. Poinsett, it being deemed a new species. The treatment which I have always adopted differs very little from that of a geranium :—cutting back the young wood about the middle of May, and planting the old plants immediately in the ground, in the open air, and allowing only one strong shoot to grow from each root, as on this you may look for a very large bractææ. Its color is the most vivid of all scarlets, holding its bloom, in the highest degree of perfection, from December until March, forming in that period the most conspicuous object in the hot-house, the bractææ being from seventeen to twenty inches in diameter. In propagating this euphorbia, it should be observed, that every two eyes of the young wood, that is cut off, will make a plant. After the cuttings are prepared, they ought to lie three or four days in the full sun, so as to dry up the milky substance that oozes from the stem ; afterwards place each singly into thumb pots, in equal parts of leaf mould and sand, and plunge them to the rim in a gentle bottom heat, preferring a bark red, with a frame placed upon it. The frame should be kept close, day and night, until such time as the eyes begin to push, when it is advisable to admit a little air in the evenings, sprinkling them with water at the same time that air is given. As soon as they are rooted, I prefer planting them out in the garden, as there they will be found to make stronger shoots, and retain a much greener foliage, than if kept in the pots and shifted. Care must be taken, when removing them from the ground in the fall, as every particle of soil ought to be allowed to hang to the ball ; otherwise, if it is broken, the leaves often fall from the plant, and the bractææ will not be produced in any beauty. Cuttings struck in May, planted out the latter end of June, will generally make shoots three feet in length ; and on these plants the finest bractææ appear. Plants may also be raised from cuttings of the root, as well as the shoots.

Yours, &c., P. Q.

Philadelphia, Nov. 8, 1835.

ART. VII. *Notices of new and beautiful Plants figured in the London Floricultural and Botanical Magazines; with some Account of those which it would be desirable to introduce into our Gardens.*

Edwards's Botanical Register, or Ornamental Flower Garden and Shrubbery. Each number containing eight figures of Plants and Shrubs. In monthly numbers, 4s. colored, 3s. plain. Edited by John Lindley, Ph. D., F. R. S., L. S., and G. S., Professor of Botany in the University of London.

Curtis's Botanical Magazine, or Flower Garden Displayed, containing eight plates. In monthly numbers, 3s. 6d. colored, 3s. plain. Edited by William Jackson Hooker, L. L. D., F. R. A., and L. S., Regius Professor of Botany in the University of Glasgow.

DICOTYLEDONOUS, MONOPETALOUS, PLANTS.

XXXII. *Ternströmiaceæ.*

CAMELLIA.

In Loudon's Magazine, for October, it is stated that *Camellia japonica* var. *francfurtensis* is not white and red, as noticed in Vol. I, p. 255, but dark and light red. The variety is now in England, in the possession of Messrs. Low & Co., of the Clapton nursery, where, we presume, small plants may be procured. The following new kinds have also been originated by Mr. Rinz, Jun., who raised the above. *C. Gunnellii*, "pure white, fine large magnificent flowers." *C. violacea superba*, "particularly remarkable for its violet color [rare in camellias], beautifully shaped flowers, and abundance of them." *C. Pronayana*, so named in honor of the Baron von Pronay, a very zealous amateur and promoter of gardening in Vienna. "It has not, indeed, a very large flower, but is very agreeably speckled with dark and light red."

Mr. Hogg, nurseryman, New York, has now in bloom several seedlings; one, *C. spectabile*, is said to be very beautiful. Mr. Wilder possesses a plant of this variety, and we shall undoubtedly have the pleasure of viewing it when in flower. *C. japonica imbricata* Mr. Wilder has had in bloom, the flower of which was true to the figure in *Chandler & Booth's Illustrations*. The foliage can never be mistaken, and this gives a decisive proof of the sportiveness of this fine variety. *C. japonica pulcherrima*, a new variety, has been in bloom in the fine collection of Mr. Sweetser; a notice of which, and others, will be found in another page of this number: it is a splendid acquisition.

XLVII. *Onagrariæ.*

FUCHSIA

discolor *Lindl.* Port Famine Fuchsia. A green-house plant; color of the flowers crimson; appearing all summer; increased like the other species; a native of the Falkland Islands. Bot. Reg., t. 1805.

In appearance somewhat like *F. gràcilis*, so much so, that Dr. Lindley says, "If we were asked to state in what respect it [discolor] differs botanically from *E. gràcilis* and *tenélla*, we should find it difficult to answer the question." It is, however, more compact in its growth, the branches deeper red, the leaves more undulated, and, what is of great consequence, hardier than any of the species or varieties in the English gardens. Most of the fuchsias are now considered as varieties of *F. macrostémna*, though specific names are retained in most catalogues. (*Bot. Reg.*, Oct.)

LXXIII. *Rosàcææ*.

ME'SPILUS (from the Greek name for medlar).

lobàta Poir. *Encyc. Bot. Sup. M. Smithii* De Cand. *Prod. M. grandiflora* Smith *Ex. Bot.*
Cut-leaved Medlar. A hardy shrub, or small tree; flowers white; appearing in spring; native country unknown. *Bot. Mag.*, t. 3442.

An "interesting species," which has been cultivated in the gardens of England for several years, under the above names. The blossoms are very neat, somewhat fragrant, and the foliage handsome. They appear in corymbose panicles, of three or four each, on the numerous terminal shoots. *M. grandiflora*, the name given to it by Sir James Smith, Dr. Hooker states, "it scarcely merits," as the flowers are no larger than *M. germanica*: De Candolle called it *M. Smithii*, without knowing that *lobàta* had been originally applied by Poiret. (*Bot. Mag.*, Oct.)

PRUNUS

japònica The Single Chinese Plum. A hardy shrub; flowers whitish, appearing in May; a native of China. *Bot. Reg.*, t. 1801.

This is stated to be the original species, from which the Chinese have, by their labor and patience, produced that loveliest of all the shrubs, which display their blossoms in early spring, in our gardens, the double flowering plum or almond, so often "incorrectly called." It was introduced by John Reeves, Esq., and is only interesting as the parent of the above named double variety, and is probably only figured to show "from what humble originals nature produces some of the most striking of her works." (*Bot. Reg.*, Oct.)

LXXVII. *Leguminosææ*.

PULTENÆA

cordata Graham Heart-leaved Pultenæa. A green-house shrub; flowers yellow; appearing in April; a native of Van Dieman's Land; introduced in 1832; propagated by seeds. *Bot. Mag.*, t. 3443.

A handsome shrub, from the representation in the plate. The foliage is somewhat similar to an epacris; the growth is erect and branching, each branch terminated by a capitate head of flowers, containing from two to five, of a bright yellow color, and slightly perfumed. It was raised from seeds, at the botanic garden in Edinburgh, in 1832, and flowered "very freely for the first time in April last." (*Bot. Mag.*, Oct.)

EDWARDSIA

chilensis *Miers' Trav. in Chili.* *Sophora macrocarpa* Smith Chilean Maya Tree. A fine hardy (?) tree; flowers yellow; appearing in May; a native of Chili; introduced in 1822. Bot. Reg., t. 1798.

“A hardy handsome tree,” with terminal racemes of fine yellow papilionaceous blossoms. It was sent to the Messrs. Loddiges, in whose collection it is supposed only to exist, by Gen. Paroissien, as a species of *Sophora*. The flowers appear in May in great profusion. It is undoubtedly a valuable addition. (*Bot. Reg.*, Oct.)

CXXIV. *Tropæolææ.*

TROPÆOLUM.

A variety called *majus venustum* is figured in Paxton's Magazine of Botany for October. It was introduced from Ghent last year [1834], “by Mr. Knight, King's Road, Chelsea.” The flowers are rather small, of a fine orange yellow, having a dash or irregular stripe of rich brown running nearly to the edge. It is raised from seeds or cuttings, and is a very desirable plant.

DICOTYLEDONOUS, MONOPETALOUS, PLANTS.

CLXX. *Ericæææ.*

RHODODENDRON

calendulæum var. fulgidum Hooker *Azalea calendulæum var. crœcum* Sims' Bot. Mag., t. 1721; *var. fulgida Tab. nostr.*, t. 3439; orange red-flowered. A hardy shrub; flowers orange red; appearing in June; supposed a hybrid. Bot. Mag., t. 3439.

A splendid variety of the *Azalea*, which, it seems now settled, must be united with *Rhododendron*. It is supposed a hybrid production, between *R. ponticum* [*Azalea ponticum*] and *R. nudiflorum var. coccineum* [*Azalea nudiflorum var. coccineum*]. The foliage is of a bright green tint, which forms a rich back ground to the numerous corymbs of elegant orange-colored blossoms. “Cultivated in pots, forced in the conservatory in the spring months, there are few plants better calculated to enliven a collection.” Dr. Hooker states that it resembles the “copper-colored Highlander *Azalea*” of Bot. Reg., t. 1366. (*Bot. Mag.*, Oct.)

CXCVII. *Gentiænææ.*

CHIRONIA (in honor of Chiron the Centaur, one of the earliest medical practitioners).

pedicularis Lindl. C. trinervis Linn. Long-stalked Chironia. A green-house shrub; flowers purple; appearing from July to October; propagated by cuttings; grows in dry soil. Bot. Reg., t. 1803.

“A pretty green-house shrub, covered with a succession of flowers from July to October.” The flowers appear on long peduncles, generally three, at the end of a branch. It thrives well in the open garden during summer, and may be kept in any “indifferent green-house.” (*Bot. Reg.*, Oct.)

CXCIX. *Convolvulæææ.*

IPOMÆA

Aitoni Lindl. Mr. Aiton's *Ipomæa*. A perennial stove climber; flowers violet-colored; appearing from April to October; increased by seeds and cuttings. Bot. Reg., t. 1794.

Similar, in the manner of inflorescence, the color of the

flower, and some other peculiarities, if we remember correctly, to *I. insignis*, noticed in Vol. I, pp. 350, 384. The leaves are trilobed cordate-subrotund; peduncles many, in aggregate clusters; corolla subcampanulate. "The flowers open in the morning." It is stated to be "not uncommon" in collections, under the name *Aitoni*. Native country unknown. Increased freely by seeds. (*Bot. Reg.*, Oct.)

CC. *Polemoniaceæ*.

PHLOX (from *flame*, on account of the brilliancy of the blossoms in some of the species).

Drummondii Hooker Mr. Drummond's Phlox. An annual Plant; growing from one to two feet high; color of the flowers brilliant red or purple; appearing in September; a native of the Texas; introduced in 1835; propagated by seeds. *Bot. Mag.*, t. 3441.

This is stated to be *annual*, only, in its duration,—a peculiarity in the genus *Phlox*, as nearly or quite all the species are perennial. It is very splendid. The seeds were sent to England in the spring of 1835, by Mr. Drummond, whose death was noticed in I, p. 466, who discovered it in that fertile country, the Texas. The plants "blossomed most copiously, and with equal profusion and brilliancy of color, whether in the green-house or in the open border," the same season. The flowers appear in terminal corymbs; the under side of the petals of a pale purple, and the upper of several tints, from rosy red to deep red and purple, varying on different plants; the eye of a deep crimson. Dr. Hooker has named it in honor of the lamented botanist, to whose zeal and researches the botanical world are indebted for this and numerous other choice and beautiful plants. (*Bot. Mag.*, Oct.)

GILIA

achilleæfolia Bentham Milfoil-leaved Gilia. An annual plant; growing about a foot high; flowers blue; appearing all summer; a native of California. *Bot. Mag.*, t. 3440.

This pretty species, which has flowered in this vicinity the past season, and which has been frequently noticed, was discovered by Mr. Douglas, in North California. It resembles *G. capitata*, but the flowers are larger and more conspicuous. (*Bot. Mag.*, Oct.)

CCVII. *Primulaceæ*.

PRIMULA.

A seedling variety of the Chinese primrose, *Primula prænitens* var. *purpurea fimbriata*, raised by Mr. Thomas Dunlap, gardener to Wm. G. Buckner, Esq., Bloomingdale, N. Y., we have now in bloom at our garden. To Mr. Dunlap's kindness, we are indebted for this fine plant. It is of much stronger growth than the parent variety, the flowers more numerous, and much larger, and each petal finely cut or fringed in the manner of *Camellia fimbriata*. It is also a very profuse flowerer.

CCXI. *Scrophularinææ*.

MIMULUS.

Mimulus luteus var. *variegatus* is figured in the Botanical

Register for October. Dr. Lindley thinks it the "prettiest of the genus." The seed sown in a damp place, under the shade of a wall or fence, not fully exposed to the sun, it grows vigorously, and flowers beautifully in May and June. In a bright sun, it "becomes a poor dwindling thing, not worth cultivation." From the latter cause, we believe, all the *mimulus*es are not truly estimated: we know of few more elegant or more desirable plants than these, when *properly* grown; and, if pains are taken with their cultivation, they amply repay the trouble.

SCHIZANTHUS.

Schizanthus pinnatus var. *humilis* is figured in Paxton's Magazine of Botany for October. It is a charming dwarf variety, raised from seeds, collected in Chili, in the garden of the Comte de Vandes, Bayswater, in 1831. We received the seeds of a variety last season, marked *diffusus*, which we suspect are the same. We have plants which will be in bloom in a few weeks: they are very dwarf in their growth.

MONOCOTYLEDONOUS PLANTS.

CCXXXIX. *Irideæ*.

GLADIOLUS.

Gladiolus pudibundus, a hybrid variety, between *G. carinatus* and *G. blandus*, is figured in Paxton's Magazine of Botany for October. It is a lovely variety, flowering with great freedom in the green-house for a long time: the color of the flowers is a delicate rose, shaded into white near the base of the petals. It is yet rare.

CCXL. *Orchideæ*.

We are extremely happy in being able to state that Mr. Wilder, of Hawthorn Grove, Dorchester, is enriching his collection with this curious and truly splendid family of plants. He has already several *oncidiums*, *Renánthera coccinea*, some *bletias maxillarias*, *epidendrums*, *dendrobiums*, &c. In our future numbers, we intend to notice some of the finest of the *Orchideæ*, figured in the London periodicals, as they will now be objects of much interest.

CCXLI. *Scitamineæ*.

CA'NNA

glauca Willd. var. *rubro-lutea* Hook. Reddish yellow-flowered. A stove perennial; growing five feet high; flowers red and yellow; appearing in August; a native of Jamaica. Bot. Mag., t. 3437.

"Among the handsomest of the genus." The foliage is very fine; the blossoms large, red, and orange yellow color. (*Bot. Mag.*, Oct.)

ART. VIII. *Calls at Gardens and Nurseries.*

WE resume our calls at the various gardens in the vicinity, believing our accounts of them to be among the most interesting portions of our Magazine. From the number of communications with which we have lately been so kindly favored, we have been obliged to exclude this article, that our correspondents might be accommodated. We hope, however, from time to time, to have the opportunity of keeping our readers informed of every thing new relating to horticulture or floriculture.

Brookline, Seat of the Hon. T. H. Perkins.—Jan. 20. We were unfortunate in calling when Mr. Cowan, the gardener, was not at home. A young lad, however, who has been for some time under his direction, and to whom the keys of the houses, as well as their care, are oftentimes entrusted, and who has acquired much knowledge in relation to forcing and gardening generally, showed us through the different departments, and was very apt in answering any questions we asked in relation to the plants. In the green-house, the plants have not yet begun to flower very profusely, and consequently we found not so much worthy of note. Owing to the intense cold during the month of December, and the dull, cloudy, wet weather which has prevailed nearly up to this date, during this month, the plants, at all places we have visited, have made but little growth, and show but few flower buds. Among the camellias here, we found in bloom, in addition to the double striped, Lady Hume's blush, myrtle-leaved, pomponé-flowered, Greville's red and double white, the latter having expanded over *fifty* blossoms, *Cliveiàna*, *Róssi*, *Elphinstònia*, *Egertònia*, *gloriòsa*, *compàcta*, *punctàta*, *ròsa sinénsis*, *Préssi*, and one or two others, the names of which we could not ascertain, and which were new to us. *C. j. Cliveiàna* is a beautiful variety: the flower fully expanded would measure at least five inches across: the color is similar to *Woodsi*, as is also the form, with this difference, that it is not so cup-shaped; the petals are few, but very large: some of the smaller ones in the centre are faintly striped with white: *punctàta* is in flower, for the first time here; we think it inferior to *eclipsis*; the flower on *Elphinstònia* was a coral red, without a blotch of white: *Róssi* is a splendid kind. The fine plant of *Enkiánthus quinquefòra*, in this collection only, is now in full bloom, and a more charmingly beautiful display we have never been gratified with: the end of every shoot, twelve in number, is terminated with an umbel of its pendulous, bell-shaped, waxlike flowers. We were surprised to notice, in Loudon's Magazine for October, that it had never flowered but once in the vicinity of London: even the Messrs. Loddiges, from whose unrivalled collection this plant was purchased, have not yet been successful in blooming it. *Strelitzia augùsta* does not yet show buds. The new flowered sage, *Sálvia involucràta*, was in bloom, as also *fùlgens* and *spléndens*; *Antholyza æthiòpica* was displaying a spike of its pretty orange and red blossoms. *Sparmannia africàna*, and *Acàcia longifòlia*, were beginning to open their buds. We noticed that Mr. Cowan raises his ericas in the centre of the pots, as recommended by that excellent cultivator, Mr. McNab, in his treatise on Cape heaths. Notwithstanding the opinion of some intelligent gardeners, that heaths cannot be grown with success in our climate, we never saw any look more flourishingly.

Under the stage, Mr. Cowan has cut fine mushrooms all the winter: he had a bed built up, which he sowed with spawn, early in the fall: the crop has been very large, and he continues to cut several every week. We wonder that they are not more grown. Their cultivation is very simple, and easily within the means of any one who has a dry cellar or shed, where the frost does not penetrate. The spawn can be

placed in boxes, or upon beds made on purpose; either way, they will produce sufficient for a small family.

The grape-house, next to the green-house, heated by A. M. Perkins's system of small inch pipes, Mr. Cowan began to force the first of the month: some of the eyes are just breaking: nothing can surpass this method for early forcing; the heat is completely at command. It can also be left with as much safety through the night as the system of large pipes. It is now much adopted in houses about London. The small house in the garden, from which the first fruit was cut last season, was also in about as forward a state as this.

In the forcing ground, but little has yet been done; some dung beds are being made, for the purpose of planting cucumbers, &c. The pits have not yet any thing planted in them.

Belmont Place, Watertown, J. P. Cushing, Esq.—Jan. 21. We were here also unfortunate in finding Mr. Haggerston, the gardener, confined to his bed by sickness. We are happy, however, in being able to state that he is much better, and will probably be able to attend to his duties in the course of two or three weeks. We walked through the range of houses, and noted down what we thought interesting, but presume many fine things escaped our observation, which he would have pointed out to us. In the green-house, *E'pæris paludosa*, *purpuracens* and *grandiflora* were in full bloom: they are all exquisite plants. *E. paludosa* is, we suspect, flowering for the first time here. *Corræa pulchella*, two or three plants of, beautifully in bloom; *Arbutus Andræchne* is coming into flower; nearly every shoot is terminated with an umbel of its delicate white tubulous blossoms; it is a fine green-house shrub: *Metrosidëros floribunda*, *Pittosporum undulatum*, the large *Acacia lophantha*, and *Azalea ledifolia*, were finely in flower: *Erica arborea* and *speciosa* (?), with some other species, were in beautiful bloom. A variety of camellia is in flower, which goes under the name of *cordifolia* (?); it is somewhat similar to the double striped, but much more beautiful; we have never seen any thing of the kind in other collections, neither do we find the name in any catalogue; the flowers of the double white, &c., had been mostly cut. The schizanthuses, with the exception of a plant or two, have not yet begun to show their flowers; *S. diffusus*, *Hookeri*, and *retusus*, of which there are several plants, are growing finely. An abundance of several species of *Oxalis* are displaying their pretty blossoms; and pots of mignonette perfume the house.—The grape-house, between the green-house and stove, Mr. Haggerston intends to plant with the larger specimens of rhododendrons, camellias, &c., and one of the former had already been planted by his direction: preparations were also making to set out another fine specimen of the same, and a large white camellia. The object is to make a conservatory. The grapes, after they have produced this year's crop, will be taken out, and probably their place supplied with some kinds of ornamental climbers. We much approve of this: nothing, in our opinion, takes away so much from the beauty of a fine plant, as to see it elevated upon a stage, where its flowers can scarcely be seen, and where the elegance of the foliage cannot be viewed. We hope this plan will be more adopted. In the stoves the plants are in a very flourishing condition, and several rare species will be in flower in a few weeks. *Euphorbia Poinsettii* is now displaying its magnificent, showy, and vivid scarlet bractæes, some of which are nearly twenty inches in diameter: on one plant, we counted seven shoots, all of which were terminated with bractæes and blossoms. A pot of orchideous plants, containing several pseudo-bulbs, which we took to be a species of *Blëtia*, had thrown up five or six spikes of beautiful purplish flowers. *Combrëtum purpureum* is growing very vigorously, and will, in the course of a few weeks, have

expanded a number of its racemes of exquisitely ornamental scarlet crimson blossoms: it has already grown upwards of eight feet. *Hibiscus rôsa sinënsis* var. *rûbra plëna* and *lûtea plëna* have been all summer, and are now in full bloom: hundreds of flowers, we presume, have been cut, during the season, from two plants set in the back of the pine pit. *Gésnera corymbôsa* we now saw for the first time, as also *Plumbâgo rôsea*: the latter is a charming species, which should be introduced to every collection: its mode of inflorescence is different from *capënsis*, the flowers appearing in dense racemes. That delicate little stove climber, *Thunbërgia grandiflôra*, had one or two flowers expanded. Of the more rare plants that will flower here during this month, we noted *Astrapæa Wallîchii*, and *Solândra grandiflôra*, the former having two fine buds: we lately understood that a large specimen in the unique collection of Mr. J. W. Knevel's, of Newburgh, N. Y., formerly belonging to Mr. Smith, of Philadelphia, would flower this winter, which it was supposed, would be the first in the country. We feel gratified in stating that we possess, in our vicinity, a plant which will also expand two of its said to be surpassingly splendid blossoms. The *Solândra* is a fine plant, and every branch is terminated with a bud. *Amaryllis pulvurulënta psittacina* is coming into flower: it is one of the finest in the collection here. *Ardisia crenulâta*, with its umbels of berries, was exceedingly interesting: several pots of *lachenalias* are throwing up spikes of flower buds: in one of the stoves, a number of pots of moss roses and Persian lilacs are being brought forward to flower in the green-house.

The *Passiflôra quadrangulâris*, which we have noticed before, is still growing vigorously, and is covered with buds and blossoms. The pine plants are looking better than we have ever observed them: since we were here last, an increase has been made to the stock, which, we should suppose, amounted now to nearly two hundred plants: some are almost large enough to show blossoms. The collection of *Amaryllidæ* is very large. Mr. Haggerston has two or three hundred seedlings of the *Amaryllis*, raised from different species, which were cross impregnated. He will undoubtedly have some five varieties. We hope more attention will be given to this beautiful tribe than heretofore: they will richly repay all the trouble of their cultivation. A species of *Mimôsa* was very pretty, with small globular heads of sulphur-colored flowers. We believe Mr. Cushing has a fine collection of hyacinths, *ixias*, &c.: some of the former were planted in small pots, and placed in the stove to force them into bloom. The utmost neatness is preserved throughout the different departments.

In the forcing ground, one hot bed only has been yet built. The numerous brick pits have cabbages, &c., wintered in them, which will soon be removed, and cucumbers, melons, lettuces, radishes, &c., planted. Owing to the absence of Mr. Haggerston from the grounds, not quite so much has been effected as usual.

Oakley Place, Wm. Pratt, Esq.—Mr. McLennan is here keeping the house as cool as possible, in order that the grape vines shall not be injured. From this cause, but few plants are in bloom, and we found not much interesting to notice. There are here some fine plants of that old but handsome species of heath, *Erica medeterrâneâ*: they were in full bloom. We would ask the question, if the trial has ever been made, whether this species will stand our winters in a sheltered situation, in the shrubbery, perhaps a little protected a year or two after first planted out. We have understood that the pomegranate *Pûnica Granâtum* var. *plëno coccinëa*, well known as a green-house plant, stood the winter unprotected in the vicinity of Newburgh, N. Y.; this *erica* is, we presume, as hardy. Both bear the climate of England without injury. We hope that more attention will be given to the naturalization of many of our

supposed tender plants; for we feel convinced that they may, under favorable circumstances, be brought to bear the severity of our winters, as well as many others which were once considered equally as tender, but which are now among the greatest ornaments of our gardens. *Málope grandiflora*, that fine annual, was beginning to display its delicate flowers, as also *Ænothèra odorata*, a pretty species; *Kénnydia coccinea*, and another species, were showy with their scarlet and purple flowers: *Strelitzia regineæ*, *Ornithógalum grandiflora*, and *Polygala speciosa*, will be in bloom in the course of a few weeks: *P. grandiflora* is now displaying its singularly elegant flowers; of camellias, we noted *imbricata*, *anemoneflora alba*, *rubricaulis*, *Chandlèri*, *rosa mundi*, *acutifolia* and all the more common sorts: *imbricata*, not quite expanded, will be crimson, striped, or blotched with white. A species of *Cineraria*, much resembling some of our indigenous golden rods, but not so showy, was coming into bloom. Large specimens of *Azalea ledifolia*, and *phœnicea* here, are full of buds. *Westringia rosmarinifolia* was pretty, with its small whitish blossoms. We are not, however, very partial to the fragrance of its foliage. *Veltheimia viridiflora*, several pots of, were throwing up their spikes for flowering; *Acacia longifolia*, the largest specimen of in the vicinity, was full of its brilliant yellow blossoms. Mr. McLennan informed us he headed the plant in a year since; but it has grown so rapidly that the same operation will have to be performed again the coming season.

Here, also, we found nothing doing in the forcing grounds. But, the coming week, Mr. McLennan informed us, he should have his hot-beds in preparation, and the seeds of cucumbers, radishes, &c., probably sown.

Nursery of the Messrs. Winships, Brighton.—The extent of this establishment is well known to most of our readers. The collection of herbaceous plants, ornamental shrubs, forest and fruit trees, is one of the best in the vicinity; and the green-house, which is upwards of eighty feet in length, is filled with a profusion of plants, which are well grown and in a healthy and vigorous condition. Since the early part of last summer, the whole has been under the management of Mr. Story, a young man of much intelligence, and great zeal in horticulture and floriculture: we were indeed surprised to find such good order and neatness prevalent throughout. Of the variety of plants contained in the nursery, we shall probably have occasion to make mention at some future time: we now confine our remarks to the green-house. We here, however, saw but little that was new. Among the camellias, *Pompônia* and *maliflora* (*C. Sasánqua* var. *plèno rosea* of the *Bot. Register*), were the only ones we saw in bloom: the former had expanded eight or ten flowers, all of which were white except one, which was blush-colored. This proves the sportiveness of the variety. Of the *Cactææ*, here is one of the finest collections in the country, and the plants most excellently grown. We are happy in stating this, for we are confident that this singular and highly ornamental tribe, when its attractions are better known, will be indispensable in every good collection of plants; and those of our readers who are lovers of the species, who already possess many kinds, and wish to add to their number, will here find a fine collection to select from. There is also some elegant plants of several species of *Erica*. Mr. Murray, lately gardener here, is one of the best cultivators of heaths, and he propagated, while with the Messrs. Winships, a large number: they have now acquired a good size. *Azalea indica hybrida*, *Erica herbacea*, *E'pacris grandiflora*, and many common plants, were in flower. Mr. Story showed us several pans of seedling cape jasmines, *Gardènia florida*: he informs us that he finds them very difficult to keep alive through the winter the first season, after planting, as they are

liable to damp off; the seeds he brought with him from the south last year. The plants are considerably crowded together, too much so, to appear to the best advantage. The demand for bouquets, however, is large, and we presume that many are placed in the house for that purpose only.

Amateur Garden of Mr. Sweetser, Cambridgeport.—Jan. 22d. The most remarkable plants in flower, in this choice collection, are the camellias. Of those new, a variety under the name of *C. j. pulcherrima* is decidedly the most beautiful. In form and color, it greatly resembles *C. j. punctata*; but the petals are not quite so much sprinkled with pink as the latter sort. It is a free grower, the foliage of a deep shining green. The difference between the two is not near so great as we have observed between two flowers on a plant of *C. j. variegata*. It is a singular instance of the similarity of two sorts, one raised in England, the other in France. *C. j. althææflora* has expanded several flowers; *Welbánkii rosea pleno*, *alba pleno*, *pæoniiflora*, *Pompônia*, *rùbra pleno*, and some others, with several flowers each. *Henriette* (belle), a French variety, is a small, single, red flower. In the course of a few days, *De Candollii* will be expanded: from the appearance of the bud, it will be red, striped or blotched with white. From one bud, on a small but vigorous plant of *fimbriata*, two perfectly formed flowers were developed: we rarely meet with such an anomaly in this genus. In the course of the present month, a number of new varieties will come into flower; among others, *Sweetii*, said to be one of the finest. The plants in the house look in excellent health. The hot water system as detailed at p. 6, works with very little trouble, and the temperature is easily kept from 42° to 48°.

Mr. Sweetser has just had completed a small pit for forcing, which is heated on the plan of the green-house: at another time, we shall speak further in regard to it.

Hawthorn Grove, Dorchester,—M. P. Wilder, Esq. From the lateness of the month, we are compelled to omit our notice of this place. The inside of the camellia house is not yet wholly finished, and consequently the plants are not arranged in their places. The steam and hot water apparatus answer every purpose, and the command of heat is more than sufficient. Several new camellias are now in bloom, but not so many as there will be during the next month. Before our next number goes to press, we shall endeavor to improve the opportunity to give our readers an account of them. Many fine plants have been added to the collection; among others, nearly a hundred new and superb varieties of *Amaryllis*.

At our Garden, we have now in bloom a beautiful variety of the *Prímula*, a notice of which will be found in another page of the present number. *Epacris grandiflora* is covered with its copious wreaths of exquisite rosy red and white blossoms. *Camélia japónica insignis*, *fimbriata*, *anemoneflora alba*, the double white, double striped, and other common kinds, are in bloom. During the month of February, the following will flower:—*élegans*, *eximia* (of the French), *florida*, *corallina*, *althææflora*, *Herbértii*, *sericea*, Parks' rose stripe, *imbricata*, *rosa mundi*, *punctata*, *Chandlèri*, *Wiltòni*, *Harrisòni* (Harrison's new white), *crassifolia* (*crassinervis*), *venosa*, *glòria bégica*, *reticulata*, and some others; *eximia*, of the French, is decidedly distinct from the English: a flower on a plant of the latter, which has opened at Hawthorn Grove, corresponding precisely with the figure in Chandler's *Illustrations*, &c. The foliage, however, of the two, is nearly alike.

REVIEWS.

ART. I. *The Gardener's Magazine and Register of Rural and Domestic Improvements*. Conducted by J. C. Loudon, F. L. S., H. S., &c. In Monthly Numbers. 8vo., 1s. 6d. each. No. LXVI and LXVII, for September and October.

THE first article in the September number is a continuation of "Notes on Gardens and Country Seats," by the conductor, and contains an account of the celebrated Font-hill Abbey, which occupies eight or nine pages. This place, when occupied by Mr. Beckford, several years since, was one of the finest in Britain. He spent immense sums of money upon it, stated to be, on good authority, £1,600,000, (about \$7,000,000). Since his time, however, it has been fast declining, and suffered to run to neglect, so as hardly to be recognised for what it was formerly.

Article II is the fourth of a series of designs for laying out a flower garden, to which is appended an improved design, with remarks by the conductor—of no value to our readers, without the accompanying plans.

The third article is also a plan for a flower garden : to this the following excellent remarks are added, which are deserving of a careful perusal, by those who have small gardens, and wish to embellish them in a high degree :

"In laying out a mixed or shrubby flower-garden, much may be done in a small space, to give variety and effect, particularly if a small stream of water can be led through it. In this case, close planting is necessary, in order to give as much variety to the walk as possible, by preventing its being seen in long distances : a rustic erection or two placed in the line of the walk, to walk through, and covered with creepers, with a recess in the centre, furnished with a seat and table, may be appropriate for such a garden ; and the streamlet, if it can be brought in, flowing over a small cascade, or issuing from some figure, it will be all the better ; and then it may be conducted to a pond for gold and silver fish, or for an aquarium ; and at some distance, towards the extreme end, it may be widened, to afford an apparent necessity for a bridge, which may be thrown over it with the assistance of the roots of large trees, on the sides of which creepers may be introduced. A mass of rockwork, in an appropriate situation, will add to the effect, also a few vases, with other embellishments. These, with the walk around properly arranged through the shrubbery, with beds of flowers here and there in the openings placed on its margin, and a few clumps, with shrubs in the centre, with a few dotted upon the grass, will make a very engaging retreat, and may be accomplished in the space of a half or three quarters of an acre, which, if of an oblong shape, is all the better."

Article VI is a description, with engravings, of a moss-house erected at Murtle, in Aberdeenshire. We extract the following account of the same :

"The ground plan has nine equal sides, with a portico all round, supported on nine rustic pillars, each one foot in diameter, with capitals one foot two inches square, and four inches thick; and on which rest four courses of rustic planks, six inches thick each, laid horizontally, which connect the whole of the pillars."

"The floor of the cell is laid with broken bottles, with their bottoms upwards, and the hollows filled in with Roman cement and sea shells. The space below the portico is paved in star and diamond forms, with small stones of various colors from the sea beach."

"The joists are four inches thick, and five inches deep, and on them rests the roof, which is slated next the timbers, with a coat of heath nine inches thick above the slates; this being considered as corresponding better with the rustic work than either slates or tiles. The wall of the cell is nine inches thick, and consists of nine upright posts, the inside of which are nailed horizontally, the upper edge standing out about an inch from the posts, strips of wood three fourths of an inch square, and one inch apart. In the interstice at the upper edge, and in those between the strips, the moss is rammed in with a wedge-shaped piece of wood. The ceiling is done in the same manner, and has the form of a star in the centre, pointing towards each corner: this star is made of *Cenomyce rangiferina*. The cornice is made of the cones of the *Pinus sylvestris* var. *rùbra*, three rows being laid horizontally, and one row set on end, and projecting a little outward. The door is made of rustic work, and has a Gothic window in it similar to the two windows in the wall, filled in with stained glass."

We hope to be enabled, in the course of the present volume, to give one or two plans as models to build by.

Article VII, on the management of grass lawns, is an excellent paper. The author recommends frequent waterings in dry seasons, particularly when placed upon dry soils; which should be commenced on the first appearance of any change in the color of the grass; manure, he also advises, should be occasionally used; the richer the better, as the less quantity will be required: it should also be very fine; and should be as free from the seeds of weeds as possible. Soot, the author observes, will impart a greater degree of energy to the soil than any other manure: it produces a beautiful verdure, and is an antidote against worms. In laying down lawns, the soil should be of an equal depth over the whole, and of equal quality; otherwise the grass will be of unequal growth.

The first article in the October number is an account of some of the residences and nurseries near London. The planting of *Arboretums*, at most all the principal nurseries, as well as at all the fine country seats in England, is becoming very general, and it was more immediately with a view to collect information in regard to many of the fine specimens of trees at the different places, that the remarks in this article were made. We hope this subject will interest many of our amateurs, especially those who have plenty of land, and induce them to plant trees in this scientific method. We believe this to be a high species of embellishment, and cal-

culated to afford much gratification to the scientific mind. The following we extract, as it may be useful to nursery-men :

"Among the *nursery practices* which were new to us here, is that of buying in seedling birch trees which have been pulled up out of the copses. These are found to root much better than seedlings of the same age and size taken out of a regular seed-bed ; doubtless because, in the latter case, a greater proportion of the taproot requires to be cut off. In the case of the young birches pulled out of the copses, the taproot, which could not get far down into the hard soil, has its substance in a more concentrated form, and is more branchy ; hence little requires to be cut off, except the ragged fibres ; and it may be considered as acting as a bulb to the upper part of the plant. The tops of the seedling birches are shortened before planting ; and the plants, Mr. Young informs us, make as much wood in one year, as regular nursery-reared birch seedlings will in two. It is found, in this part of the country, that the downy-leaved black-barked seedling birches stole much freer when cut down as coppice wood, than the smooth-leaved white-barked weeping variety. The plum-leaved willow is here grown to a great extent for planting in copses, as also are the common ash and the sweet chestnut."

In the *Epsom Nursery*, *Cláanthus puniceus*, *Deutzia scabra*, *Benthámia fragifera*, *Bérberis Aquifólium*, and various other rare shrubs, are for sale by the hundred. The collection of climbing roses is stated to be beyond all praise.

Article II, is the first of "a series of designs for laying out suburban gardens and grounds from one perch to several acres in extent." Designs 1 and 2 are for frontages of houses, containing one and a half perch each. The author remarks :—

"The series of designs which I propose for your acceptance will consist of what may be termed "designs for suburban gardens," and such as, perhaps, may be useful to some who may be about to commence the laying out of gardens to the extent of any of the designs that this series will embrace. I have begun at a low scale, namely, that of mere frontages to houses that are attached or joined together ; the first of which consists of four frontages, of one perch of ground to each ; and the second also of four frontages, consisting of about one perch and a half to each. The ground to these being of small dimensions there is not room for much display of taste and variety ; but it may not be amiss to offer a few hints upon them ; and first, with regard to the walks :—these I should prefer being laid down with stone, with neat kerbs, about 2 in. high at the sides ; and, where there are clumps that do not join the walks, I should prefer them to be surrounded with grass rather than gravel, as I consider the latter to be in bad taste, though it is frequently employed in the vicinity of the metropolis.

"With regard to the plants and shrubs proper for gardens of this description, I should recommend their maximum of growth to be in proportion to their situation, as by this means a greater variety may be introduced. I have seen instances where a single tree has overshadowed nearly a whole garden of this description, and thus rendered void the possibility of anything else growing therein. I would recommend, also, that the partition fences of the frontages, of whatever material they may be constructed, should not exceed the height of 6 feet, in order that as free a circulation of air as possible may take place, as this is highly ne-

cessary for the health of the plants, and particularly in situations of this kind, where, under the most favorable circumstances, they will be much confined. With regard to the choice of shrubs, I should introduce as great a variety of evergreens as possible, of those kinds which, from observation, I have seen to succeed; an enumeration of which, including also deciduous shrubs and flowers, would be very acceptable from any of your correspondents who have had experience in the management of suburban gardens. Among the common evergreens that appear to flourish in these situations, I have noticed the common and variegated hollies, the common box tree, the Chinese arbor vitæ, the *Aucuba japonica*, the red cedar, the evergreen privet, and the giant ivy. The latter of these, (the ivy) which grows luxuriantly in most situations, might not only be used to cover walls and fences, but might be trained up in pyramids, or any other form which taste might point out, by having a frame work fixed in the ground for training it to; and if jasmine, clematis, or some other light climbers, were intermixed with the ivy, they would, I think, give a relief, and, at the same time, add to its beauties during the summer months. As it respects deciduous trees and shrubs, I should make use of the lightest and handsomest flowering kinds that would thrive, and such as, by an occasional and judicious pruning, might be kept within bounds. Decorations might also be introduced upon a limited scale, consisting of ornamental vases and other tasteful designs."

Very useful papers, but the plans annexed are too expensive for our work.

Article V, contains "simple and expeditious modes of ascertaining the heights of trees; by the Conductor, and Richard Varden, Esq. These modes are illustrated with engravings, which we shall endeavor to insert in a future number.

The following is a simple method, and answers very well in the cases mentioned:—

"Trees are either crowded together, or standing singly, or so as to be clear from other trees on at least one side. In the former case, they are best measured by sending up jointed rods, formed of deal, or any other light wood. First one rod (say 5 feet, or 10 feet in length, and half an inch in diameter) is pushed up the side of the trunk, and held there by the left hand; and a piece of tin tube, about 4 inches in length, and of the same diameter in the clear, as the rod is put on the lower end of it about two inches. One end of this tube being firm on the rod which is held up alongside the trunk with the left hand, insert another rod in the other end of the tube with the right hand, and so on, till you have pushed the jointed rod so formed to the top of the tree. Then take it down and count the number of rods, &c., putting each piece of tin tube, as it is taken off, in your pocket. This may seem a tedious operation; but a man and a boy, with fifteen rods, and fourteen pieces of tin tubing, will measure more than one hundred trees in a day."

Another method is as follows:—

"The height of single trees may also be taken with expedition during bright sunshine by their shadows. Set up a rod, say of six feet in height above the surface, and measure its shadow; then measure the tree's shadow, and find the height by the Rule of Three."

Among the reviews we find our Magazine very favorably noticed, and numerous extracts made from our article of "Calls at Gardens and Nurseries;" the original articles

are said to be "very interesting." We are sorry, however, to learn from this, that the second article, in our February number, by our much respected correspondent, Grant Thorburn, Esq., is merely a reprint of a passage in the *Encyclopedia of Gardening*, second edition, § 7710, to § 7722, written by Mr. Loudon long since. The words "America" for "Europe," and "American" for "European," being all the alterations from the original copy. The article we much valued, and its excellency is none the less for being an extract; but we do not wish ever to insert an article as original, however interesting its contents may be, which is not decidedly so. We supposed this, as we have every communication that has appeared in our pages since the publication of our Magazine, to be original. We think that no other articles will be found not to be so; if, however, they are, we have unknowingly been led into such errors by our correspondents.

Short extracts are made of the country seat of the Hon. T. H. Perkins, at Brookline, Belmont Place, Oakley Place, the garden of J. Lemist, Roxbury, Hawthorn Grove, &c. In relation to the practice of cultivating vines on the coiling system of Mr. Means, which we have ever considered as visionary, the conductor very judiciously remarks:—

"With due deference to all the parties concerned, we think Mr. Mearns's mode of growing grapes, let it be ever so successful, singularly ill adapted for America, where the price of labor is so high. Instead of hearing of the energies of gardeners being directed to forcing by the coiling system, we would rather hear of their attempting a high degree of order and neatness in their pleasure-grounds; of their having smooth, close, dark green turf; smooth, even, firm gravel; and neat and delicate edgings to walks, beds, and borders. Forced flowers are a very allowable luxury in a country having long winters, and so are forced fruits; but we think that it argues a want of judgment to go a roundabout way to attain either of them."

Now we believe this in a great degree to be true, in relation to gardening generally. We have already often touched upon the subject of landscape gardening, the ornamenting of lawns, parks, &c., the planting of shrubs with a view to render the garden a more finished specimen of art than it is at present; and we acknowledge, in part, the truth of the above remarks: true, our natural scenery is an object of admiration, but we have as yet few specimens of that refined appearance which is the most attractive feature in English gardening, and which has commanded the astonishment of every observer. We may be thought too foreign in our opinions, but with all due praise to the exertions of our friends in the advancement of gardening, we must confess that we are but yet in its infancy, and have much to acquire before we shall arrive to any degree of eminence.

MISCELLANEOUS INTELLIGENCE.

ART. I. General Notices.

To destroy Insects by a Solution of Chlorine.—In the May number of the *Irish Farmer's and Gardener's Magazine*, p. 227, a correspondent, Mr. H. Hall, states that he has employed this solution for the last three years. It is "made by mixing with twenty gallons of spring water, a pound of the chloride of lime (or common bleaching powder), in a large jar, which can be easily made air tight; to this add about a pound of sulphuric acid (vitriol), which disengages the chloride, and, uniting with the lime, precipitates in the form of sulphate, leaving a clear solution of chlorine." No mention is made of the mode of using this solution, but probably by syringing the plants infected.—*Conds.*

Mining Insect on the Rose.—The peculiar appearance of the leaves of rose-bushes, which is frequently observable in the fall of the year, in which their upper surface are marked in various directions with broad brown lines, having a narrow darker colored one down the middle, is caused by the small caterpillar of a minute moth (*Microsetia ruficapitella*), which feeds inside the leaf. When full grown it is nearly two lines long, of a yellow orange color, with a brown mark down the back, the head very flat and sharp, and light chocolate. About the 24th of October, when full grown, it eats out of the leaf and crawls down the stem, until it has found a convenient place to fix its cocoon; this is very flat, at first of a pure white, which is changed by the first shower of rain to light orange: it afterwards changes to a deep brown, nearly resembling the color of the bark of the bushes, and scarcely distinguishable to the eye. The pupa is light brown, of an oval shape, about a line long, and half that in breadth; the perfect moth appears about the 12th of May. This is the *Tinea ruficapitella* Haworth. The wings are gold colored, with the apex purple, the head ferruginous; expansion of the wings, two and three quarter lines. (*Entomological Mag.*, Vol. I, p. 424.)

ART. II. Foreign Notices.

ENGLAND.

The Metropolitan Society of Florists and Amateurs held a show of flowers in Vauxhall garden, on Aug. 20th last. Prizes were awarded for pansies, dahlias, China asters, roses, picotees, carnations, cockscombs, orchideous plants, *Clêthra arborea*, &c. &c. A plant of *Magnolia grandiflora*, under a foot in height, was exhibited bearing a fine flower. "A box of petunias," of various sorts, cut from the plants, and their stems passed through holes in the lid, into water, we infer, was contributed by Mr. Dennis. The visitors were numerous.—(*Gard. Mag.*)

The dwarf fan Palm (*Chamærops humilis*) has flowered in the botanic garden at Oxford for many years. The plant is supposed to be nearly a century old. The whole height of the plant is five feet six inches; the

petioles of the full grown leaves are four feet long; the lamina, or expanded part of the leaf, one foot four inches long and two feet broad; diameter of the space the plant covers, nine feet six inches, or twenty-eight feet in circumference.—*Ib.*

Oncidium ciliatum.—A specimen of this fine plant, with forty-four flowers in a panicle, was exhibited before the London Horticultural Society on Nov. 4, 1834. The gold medal placed at the disposal of the society, by the Rt. Hon. Lord Grey, for the best orchideous or parasitical plant, was awarded to Mr. James Bruce, gardener to Boyd Miller, Esq., for this production.—*Ib.*

Royal Duke Cherry.—A fruit under this name was exhibited before the London Horticultural Society on July 21, 1835. It was received from France under the name of *Royal tardive*, or *Anglaise tardive*. Its qualities are stated to be equal to the *May duke*, and it ripens just after the latter is gone. We should be glad to know if there is a variety cultivated for sale in our nurseries under the above name; if not, it would be an object to introduce it.—*Conds.*

GERMANY.

Botanic Garden of Berlin.—In this garden there are cultivated in the open air, between 1500 and 1600 hardy trees and shrubs. It is on an open space, and is exposed to storms: the soil is light sand and moist peat, for the most part, and the trees grow well. We notice this garden in order to show the number of plants which bear the open air in the severe climate of Germany, where some of the North American species of *Pinus* in the same situations do not live. It proves the vast importance of giving more attention to the naturalization of plants. The species and varieties which are enumerated, we copy entire:—

“Protected by large trees, or in places where the cold from the north and east wind is not felt, we grow, in the open air, *Salisbùria adiantifolia*, *Jasminum fruticans*, *Camphorósmia monspeliaca*, *Paliurus aculeatus*, *Zizyphus vulgaris*, *Aràlia spinosa*; *Bérberis Aquifolium*, aristata, and sinensis; *Asimina parviflora* and *triloba*, *Kölreutèria paniculata*, *Laùrus Sássafras*, *Hydránga quercifolia*, *Decumària bárbara*, *Cydônia japónica* and sinensis, *Photinia arbutifolia*, *Raphiòlepis indica*, *Eriobótريا japónica*; *Cotoneáster acuminata*, affinis, *macrophylla*, *laxiflora*, *frigida*, and *rotundifolia*; *Magnòlia glauca*, *tripétala*, *auriculata*, *macrophylla*, *conspicua*, and *obovata*; *Spártium júnceum*, *Onònis fruticosa*, *Hibiscus syriacus*, *Colútea nepalensis*; *Astrágalus caucásicus*, *aristatus*, and *tumidus*; *Malcùra aurantiaca*, *Liquidámbar imberbe*, *Myrica cerifera*, *Coriària myrtifolia*; *Nyssa villosa*, *tomentosa*, and *biflora*; *Nitrària Schóberi*.

Where there is no protection from the snow in winter, the small trees and shrubs are sheltered by the foliage of the *Pinus Stróbus*; and, when the winter is very severe, the branches of the *Pinus sylvéstris* is used, being placed all round the plant.

In mild winters, the following stand out; but in very cold weather they are sometimes killed by the frost:—*Rhámnus Alaternus*, *Vibúrnum Tinus*, *Laùrus nóblis*, *Olea Oleáster*, *Phillyrea angustifolia*, *Rosmarinus officinalis*, *Arbutus Unedo*, *Vitex Ágnus cástus*, *Lúcuba japónica*, *Pistácia Terebínthus*; *Rúscus aculeatus*, *racemósus*, and *hypoglóssum*. Without any particular protection, but in sheltered situations, there stand out here *Ilex Aquifolium* and its varieties, and *I. opàca*; *Smilax*, *Rhododéndron*, *Kálmia*, *Dáphne póntica*, and *Cneòrum*; *Ulex europæa*, *nàna*, and *provincialis*, and *Táxus canadensis*. *Ephedra distachya*, *monostachya* and *altíssima* stand out without any protection whatever. We have but few evergreen shrubs which stand out without protection.”—*Gard. Mag.*

ART. III. Domestic Notices.

Oxalis crenata.—You have no doubt heard much both for and against the productiveness of this bulb. Four years ago I grew it in a small pot, and afterwards threw it out as useless, producing nothing but fleshy fibres. I tried it again last spring, and planted a bulb in the ground and earthed it up as we do the potatoes in Ireland: this fall I lifted two quarts at one root. J. B. Smith, Esq., of this city, put a small box round the bulb he had in the ground, and, as it grew, filled the box with earth; it produced half a peck of tubers of the size of small potatoes. If cooked dry they are very pleasant to taste, but if cooked wet they are nauseous: the tops make an excellent salad, and it may be considered a very useful vegetable, and will, no doubt, gain favor.—*Yours, B.—Philadelphia, Dec. 1835.*

Passiflora edulis.—When you visited this city, your limited time prevented you from taking a glance at the lovely and handsomely arranged garden of Mrs. Stott, late of Castle Dykes, Scotland. I saw a few days ago at her country seat, a *Passiflora edulis*, growing on the back of a new vinery, only planted from a cutting last spring, and now covers an area of 320 feet, and loaded with hundreds of fine fruit. The gardener, a very scientific man, (Mr. Wm. Chalmers) told me there had been a great many pulled. The fruit is equally as rich in flavor as any of the fine sorts of gooseberries.—*Ib.*

Pennsylvania Hort. Society.—The only articles of interest exhibited before this society, on the evening of the 21st inst. were cucumbers from the garden of Mrs. Stott, presented by Mr. Chalmers, and a plant of *Euphorbia Poinsettii*, from the garden of H. Pratt, Esq., grown from a cutting since June last—had two branches a foot high each, and crowned with a bractæ sixteen inches in diameter.—*Yours, A. B., Philadelphia, Dec. 1835.*

Cleome grandiflora.—We had but just finished writing the short notice in our December number, respecting this fine plant, and sent it to press, when we received a letter from Dr. Ward, in which, among many other interesting notes, he makes the following observations in relation to it:—

“I shall be glad if you will let me know how you succeeded with the seeds of the *Cleome grandiflora*, which I sent you. I was a little disappointed in seeing no notice of it in the reports of your exhibitions, though perhaps it were too early [Nov. 20]. My own plants are later, and have not done quite so well this year as last; but there is no mistake about it at all, that, if well grown, few things can equal it in the green-house, in December. I find it can be propagated by cuttings, treated like balsamines, and other such succulent things, and hope you will try a few, as I am now doing, to turn out in the border in spring.”

We hope it will be flowered to perfection the coming season.—*Conds.*

Astræa Wallichii.—This magnificent plant mentioned in another place as in bud at Belmont Place, is now in bloom at the nursery and exotic garden of R. Buist, Philadelphia. We have been kindly promised a description of it.—*Conds.*

ART. IV. Retrospective Criticism.

The To Kalon Grape.—In your Magazine for December, I perceive some remarks on the To Kalon grape, and a doubt is expressed whether it is synonymous with the Catawba. Permit me to place this question at

rest, so far as my testimony will go. In the spring of 1834, I received by mail one or two grafts of this variety, taken from the parent vine, sent to me by a gentleman residing in the State of New York, who had published a flattering description of its merits, derived from those who had seen the fruit in perfection. I succeeded in raising one plant, which, during the past autumn, matured several fine clusters; and I have no hesitation in saying that the fruit is identical with the Catawba. I compared them in various stages, and could never discover the slightest difference, either in flavor or appearance. They are precisely alike in the oblate form of the berry, the color of the fruit, the period of ripening, and in the peculiar disease which affects a portion of the berries when they are nearly grown. It has been said, and I find the same thing repeated by you, that Dr. Spafford raised the To Kalon from the seed, probably, of a foreign variety. On examination, the most superficial botanist will readily perceive that the plant bears no affinity to the foreign species. It is, beyond doubt, a variety of *Vitis labrusca* in which species so many valuable native varieties are found. If the To Kalon be a seedling, its parentage is purely American. We have already two grapes, namely, the Catawba and Muncey (and this may perhaps make the third), which, on the authority of Maj. Adlum, were discovered in different and remote parts of the country; and between them, every point which can constitute identity is complete.—Yours, T. S. P.—Beaverdam, Va., 1st mo. 12, 1836.

Maclura aurantiaca.—Gentlemen,—I have no apology to offer for intruding upon the pages of your valuable Magazine, except to elicit facts, and more especially upon a subject that has been so often (*faintly*) handled, not only in this country, but in almost every horticultural periodical in Europe. The *Maclura aurantiaca* is a dioecious plant, and (although it has been contradicted) Mr. Nuttall is perfectly correct in placing it in *Decècia tetràndria*. In McMahon's nursery, near this city, there are four trees that were among the first introduced. These trees are planted two and two, each pair being about 400 feet apart. While that nursery was in the possession of the late firm of Hibbert & Buist, in 1831—2, the proprietors were astonished at discovering that one of the trees produced larger fruit than the others, which fruit contained perfect seeds. Two of the other trees produced fruit nearly as large, that were abortive, while one of the trees was entirely barren. The next year, the trees were closely observed; and, in June, 1832, the barren tree proved to be the male plant, and the tree that produced seeds stood by its side. The flower of the male tree is very diminutive, and of a green color, so that the tree may be passed, by a common observer, while in full bloom, unnoticed. Perhaps the reason that the true character of the plant has been generally obscure, is, that the female tree seemingly produces perfect fruit.

The *Maclura* is not only very ornamental, but it retains its foliage longer than any other deciduous tree. It will prove to be useful for ornamental fences, if properly attended to; but, for general fencing or hedging, doubtful. The wood contains a beautiful yellow dye, and I doubt not but it may prove as fine a dyeing material as *Broussonètia tinctoria*, properly *Morus tinctoria*, or fustic-wood.—Yours truly, R. Buist.—Philadelphia, Jan. 9, 1836.

Exhibitions of Horticultural Societies.—Do you not occupy too many of your valuable pages with voluminous matter, and names of plants, &c. exhibited at meetings of Horticultural Societies? for instance, 150 names of dahlias from one place, many of them as old as our memory; why not give us only a few names of the most select sorts.—Yours, B.

ART. V. Quincy Market.

<i>Roots, Tubers, &c.</i>		From	To			From	To
		\$ cts.	\$ cts.			\$ cts.	\$ cts.
Potatoes:				Lima, per cwt.....		4 00	
Common, { per barrel,.....	1 25	1 50		Palermo Squash, per pound....		6	
{ per bushel,.....	37½	50		Pumpkins, each,.....		12½	25
Chenangoes, { per barrel,.....	1 50	1 75		<i>Pot and Sweet Herbs.</i>			
{ per bushel,.....	50	62½		Parsley, per half peck.....		75	1 00
Eastport, { per barrel,.....	1 50	2 00		Sage, per pound,.....		17	20
Sweet potatoes, per bushel,	none.			Marjoram, per bunch,.....		6	12
Turnips:				Savory,.....		6	12
Common, { per barrel,.....	75	1 00		Spearimint,.....		6	
{ per bushel,.....	25	37½		<i>Fruits.</i>			
Yellow French, per barrel,..	1 00	1 25		Apples, dessert:			
Onions:				Common, { per barrel,.....	1 50	1 75	
Common, { per barrel,.....	2 00	2 25		{ per bushel,.....	62½	75	
{ per bunch,.....	62	87½		Baldwin, { per barrel,.....	1 75	2 25	
White, per bunch,.....	4	6		{ per bushel,.....	1 00	1 12	
Beets, per bushel,.....	6	75		Russets, { per barrel,.....	1 75	2 25	
Carrots, per bushel,.....	50	75		{ per bushel,.....	87	1 00	
Parsnips, per bushel,.....	75			Pears:			
Salsify, per bunch,.....	12½	12½		St. Germain, per dozen,.....	none.		
Horseradish, per pound,.....	10			Winter, { per barrel,.....	4 00	5 00	
Shallots, per pound,.....	20			{ per bushel,.....	2 00		
Garlic, per pound,.....	14			Quinces, per bushel,.....	none.		
<i>Cabbages, Salads, &c.</i>				Pine Apples,.....	25	50	
Cabbages: per dozen.				Grapes:			
Savoy,.....	75	1 00		Malaga, per pound,.....	37½	50	
Drumhead,.....	75	1 00		Barberries, per bushel,.....	none.		
Red,.....	75	1 00		Cranberries, per barrel,.....	7 00	7 50	
Brocoli, each.....	37½	75		per bushel,.....	2 50	3 00	
Cauliflower, each,.....	37½	75		Oranges, { per box,.....	2 50	3 00	
Celery, per root,.....	10	25		{ per dozen,.....	37	62	
Lettuce, per head,.....	6	12½		{ per box,.....	2 00	2 50	
Radishes, per bunch,.....	10	12½		Lemons, { per hundred,....	1 00	1 25	
Spinach, per peck,.....	17	50		{ per barrel,.....	6 50	7 00	
<i>Squashes and Pumpkins.</i>				{ per bushel,.....	2 00	2 50	
Canada crookneck, per cwt.,...	3 00	4 00		Walnuts, { per barrel,.....	4 50	5 00	
Common crookneck, per cwt...	3 00			{ per bushel,.....	1 75	2 00	
				Almonds, per pound,.....	12	14	
				Filberts, per pound,.....	4	6	

REMARKS The state of market, during the last month, has been dull, and but few sales, to any great amount, effected. Potatoes remain about the same; sales rather brisk; very few have as yet arrived from the eastward, owing to the cold weather. We had intended to make some observations on the sorts generally brought in for summer use, and their comparative earliness and quality, as, also, to notice some new kinds which have been proved the past year to be excellent; but we leave this till our next. Turnips are yet plenty. Sales of onions for shipping, since our last, have been few, and consequently prices are lower; but they are so fluctuating an article, according as the demand is greater or less, that, before our next, they may have advanced to much higher rates. Of beets, carrots and parsnips, the crop is abundant, and prices moderate. Salsify is scarce. Horseradish is plenty, and of excellent quality. Cabbages are becoming much more scarce, and prices have advanced considerably; the stock on hand is very small. Of brocolis, there are very few. Cauliflowers are nearly gone. Celery is very scarce, and prices high; numerous quantities remain frozen in the ground. Lettuce is tolerably plenty, of fine quality, and prices very moderate for the season. Radishes are much more plentiful, and of larger growth. Canada crookneck squashes are about gone; those on hand command a good price; common kinds are also higher; few Lima in the market; the past week, two squashes from Palermo, weighing 69 pounds each,

were sold at quotations; said to be a fine variety. The stock of apples is very large, and but few sales effected; very little indeed is doing in this fruit; prices at the south are uncommonly low. Of pears, there are no fine eating kinds in the market. Cranberries remain the same. Oranges and lemons are lower; the stock is, however, very small; but several large arrivals are daily expected. Sweet oranges are very scarce. Chestnuts are lower, and but little doing in the article. Walnuts are lower; nearly all the northern nuts are very poor, the early frosts having severely injured them; southern ones are exceedingly fine. Yours,

Boston, Dec. 21st, 1835.

M. T.

ART. VI. Massachusetts Horticultural Society.

Saturday, January 2.—Exhibited. From M. P. Wilder, flowers of the following camellias:—*C. japonica anemoneflora alba*, *Chandlèri*, and *rosa mundi*; the latter, the first flower of the kind exhibited before the society.

From Wm. Pratt, Jr. Esq., Oakley Place, an apple, the name lost: supposed the Pomme Gris. From Wm. Kenrick, received from Dr. S. P. Hildreth, Marietta, Ohio, an apple, called the Lemon pippin, a fruit medium size, oblong, conical; skin pale yellow; flavor excellent; also the pound pear, a fine large specimen. From Cheever Newhall, *Beurré d'Arenberg* pears. From E. Bartlett, Golden pippin apples; the specimens perfect; also pippins, Lady apple and Fountain apples.

January 13.—Exhibited. From M. H. Ruggles, Fall River, specimens of two kinds of native pears; the original tree growing in Rhode Island. Mr. Ruggles suggests that they should be named the *Chase pear*, and the *Ward pear*.

Received. A letter from B. Maund, Esq., of Broomsgrove, England. A paper on the naturalization of plants from Mr. A. J. Downing, Newburgh, N. Y.

January 16.—Exhibited. From R. Manning, Danvers Sweet, Ribston pippin, Conway, Boxford, Ortleypippin, Pickman, Lyscom, and Bellflower, apples; also a good baking apple; Catillac, Gloux morceaux, and Passe Colmar pears. From S. Downer, Bezi Vaet pears. From Dr. O. Fiske, Worcester, Quince apples. From J. W. Foster, Portsmouth, N. H. a seedling apple. From Rufus Kittredge, Portsmouth, N. H., eight kinds of apples, names mostly unknown; some of very good qualities; one marked No. 8, supposed Gardner's sweeting.

January 23.—Exhibited. From M. P. Wilder, flowers of twelve varieties of camellias:—*alba plena*, *anemoneflora alba*, *Chandlèri*, *Augusta*, *Charles Auguste*, *punctata*, *Róssi*, *variegata plena*, *papaveracea*, *oxoniensis*, *rosa mundi*, and *imbricata*.

From S. Sweetser, flowers of *Camellia japonica althæaeflora*, *fimbriata* and *pulcherrima*. From the Hon. T. Lyman, Jr. a variety of pear, supposed the 'Echasserie. From C. Newhall, Wilkinson pears, and two kinds of apples, names unknown. From Jos. Balch, an English apple, the name unknown.

ART. VII. Meteorological Notices.

FOR DECEMBER.

December, throughout, was unusually cold: the 16th was probably the coldest day upon record, the mean temperature, from sunrise until sunset, being 13° below zero. The prevailing winds were westerly. There were several squalls of snow, with some hail and frozen rain. Previous to the 24th, the snow upon the ground thawed but very little. After this date, until the end of the month, the weather was quite mild, accompanied with considerable rain.

THERMOMETER.—Mean temperature, $19^{\circ} 24'$. Highest, 40° —Lowest, 18° below zero.

WINDS.—N., six days—S., six—S. W., four—W., eleven—N. W., four days.

Force of the Wind.—Brisk, nine days—light, twenty-two days.

Character of the Weather.—FINE, twelve days—FAIR, four days—CLOUDY, fifteen days.

Rainy, two days—Snowy, four days.

Depth of the Snow (in inches), 8.22.

MONTHLY CALENDAR

OF

HORTICULTURE AND FLORICULTURE,

FOR FEBRUARY.

FRUIT DEPARTMENT.

Grape Vines in the green-house in general will not yet have started their eyes. The wood should all be bent, turning the tops of each shoot towards the front of the border, in order that the buds may break equally. In graperies, if it is intended to begin to force this month, the same treatment should be observed as recommended in our I, pp. 79, 119, 159.

Strawberry Plants may still be taken into the green-house for a succession. (See Vol. I, p. 253, and present number, p. 47.)

Grape Eyes or Cuttings may be put into the hot-bed this month, and their growth much forwarded; they should be put singly into number one pots.

FLOWER DEPARTMENT.

Camellias will now be rapidly swelling their flower buds, and will require considerable water.

Geraniums may be now propagated by cuttings where duplicates are wanted of rare kinds. (Vol. I, p. 249.)

Calceolarias will now be growing rapidly, and will require repotting.

Hyacinths in pots, which have been plunged in the ground, should now be taken up, and exposed to light and heat.

Gladiolus natalensis may be now potted to flower early.

Dahlia Seed should now be sown.

Schizanthus plants will want repotting this month.

THE
AMERICAN
GARDENER'S MAGAZINE,
MARCH, 1836.

ORIGINAL COMMUNICATIONS.

ART. I. *On the Construction of Brick Pits for early Forcing; to which is added the Cultivation and Forcing of the Cucumber; taken from Horticultural Memoranda, and exhibiting the State of their Progress from January until September.*
By the CONDUCTORS.

(Continued from Vol. I, p. 401.)

JOURNAL.

January 20th, 1832.—The weather, all the month, up to this date, has been very fine, and accompanied with but little severe cold, the thermometer indicating an average temperature, at one o'clock, P. M., of about 4° above freezing (32°). Considerable snow lies upon the ground, which fell in the month of December last. Preparations, however, have been made, to put the pit into operation. The soil which remained in the bed (about four inches in depth) being somewhat frozen, the sashes have been placed on, and the front doors covered with straw or hay: at night, the sashes have been covered with mats and hay, in order that the heat from the sun during the day might be retained. One or two squares of glass which were broken have been repaired, and everything put in readiness to proceed with the forcing. [We have memoranda taken from the year 1830 to the present time. The reason why we select that of 1832, is, that we were more successful in our mode of cultivation than the two years previous. The quantity of fruit was considerably greater, and the vines much more luxuriant; the forcing was also commenced nearly two months sooner. From the latter cause alone, we have selected the above named year, as the later forcing is com-

menced, the easier it is carried on,—the inclemency of our winters, the great quantity of snow which often falls, and the severe cold, rendering it extremely difficult and uncertain in the months of January and February; and where the old hot-bed system is pursued, the labor and uncertainty is still greater. In the following notes, extracted from our Journal, we have occasionally added some observations. But we think this method will be better understood, than if we made no reference to dates, and merely detailed our mode of cultivation.]

Jan. 21st. The snow, which commenced falling last evening, and continued through the night, covering the ground to the depth of about two and a half inches, has rendered it somewhat inconvenient to add the manure to the pit to-day. Temperature in the open air, at sunrise, 33°.

23d. This morning the mercury fell as low as 5°. The soil in the bed still remains partly frozen; but the sun shining very bright, has thawed the surface. Ten barrows of manure, fresh, and in a good state of fermentation, were added to-day. The doors were closed tight, and hay and straw put against the crevices, and in front of them, by placing up square pieces of board. The sashes were covered at night with one thickness of bass mats; on top of these, soft hay, to the thickness of three or four inches, and on the hay, one more thickness of mats. A few narrow strips of boards were then put on, to prevent the wind from blowing the covering off, should it blow violently during the night.

24th. The weather to-day moderate; temperature, at sunrise, 29°; cloudy, and little misty. Added eight barrows more of manure, and stirred the whole well together. Covered up as on the previous evening.

25th. Rainy; temperature 50°, and to-day the heat in the bed began to rise; temperature 50° at sunrise. The sashes covered, as mentioned the 24th, every night.

26th. Temperature, at sunrise, zero; snow fell during last night, to the depth of five inches. Temperature of the bed, at sunrise, 50°.

27th. Temperature 13° below zero. In consequence of the extreme cold, could not open the bed without the fear of losing much heat. Temperature of the bed, 54°.

28th. Thermometer 8° below zero. Cucumber seed planted to-day. The kind best adapted to forcing being considered the *true* Southgate, this kind was planted. The soil in the bed being composed almost wholly of well decayed leaves (but a small portion of common garden earth being added), pots four inches in diameter at the top, and four deep, were filled with it: two or three small pieces of

broken pots we first placed over the hole in the bottom of each.

The seeds were then sown, three in each pot, covering them about half an inch deep: the pots were then plunged under the centre light, in the middle of the bed, bringing them up as near as possible to the glass, that they might receive all the benefit of the air admitted into the bed. Thus prepared, the sashes were shut tight, and at night covered up warm. This variety (the Southgate) we have found to be the best, having tried it for several years: the seed is rarely to be found of genuine quality; and, from this cause, it has been pronounced inferior by some growers; but we believe no kind to be earlier, or give a greater quantity of fruit. Temperature of the bed, 65°; of the soil, 75°.

29th, 30th, 31st. Weather more moderate, with rain; the air in the bed has now acquired a greater heat, as also the soil.

February 1st. The heat of the bed to-day is very brisk. The bright sunshine and the moderate temperature of the weather, combined, air is admitted in greater quantity. From the want of this, the plants which appeared above the soil in the pots this morning, are somewhat drawn up, and show the great necessity of giving air when the seeds are in the first state of vegetation, as well as when the plants are in a more advanced and progressive age. It is a striking instance of the want of air, as well as light, to see the cotyledons, or seed leaves, of plants thickly sown, as soon as they appear above the ground, stretch forward eagerly to catch the first glance of the sun's reviving rays, each one seeming to advance above the other, as if fearing it would be deprived of an equal portion of his refreshing power. Air was admitted about 11 o'clock in the forenoon, by tilting up the sashes at the back of the pit about half an inch. If the air is sharp, a bass mat should be laid over the apertures, to prevent the plants being too suddenly chilled. A pan of soft water was placed in the bed this morning, to become heated to the same temperature, in order to water the plants as soon as needed. The plants looking thus flourishingly, if the weather continues moderate, a good growth may be expected. To give the temperature of the air in the bed, as well as the soil, as taken three times each day, would occupy considerable room; we have therefore concluded, from the want of space, to give the temperature every three or four days (three times each day, viz., morning, noon and night), it varying very little in the intermediate time. We think this a better mode than to give a long table of figures for each month. The dates will, also, only be given when any thing of importance has occurred; as, often,

for two or three days, nothing was done but to give air during each day; watering the plants, if requiring it, and covering up the sashes at night. The covering up of the sashes is very important, as it tends greatly to keep an even temperature. That which we have found to answer the best purpose, and guard against the cold in the most efficient manner, was a covering of mats and hay, laid on as mentioned previously: this should be continued until April, on no account omitting a single night, however favorable the weather may be at sunset; for we have repeatedly known the thermometer to stand at 32° at that time, and fall as low as zero before daylight.

4th. Temperature of the air in the bed, 64°, 75°, 66°; of the soil, 75°. Air was admitted in greater quantity to-day, the sashes being opened an inch at the back. The plants were slightly watered. Three pots more of cucumber seeds were sown to-day, in order to have a few plants to replace the others, should they meet with any accident by which their growth would be retarded. We have sometimes had those of the first sowing damp off when the weather had continued cloudy for some days, especially when they were first hilled out, it being very difficult to prevent this; while those still growing in pots can be kept dry or moist at pleasure; and answer, as a resource, in any case.

7th. To-day, two barrows of fresh manure were added, the heat having subsided a little. Temperature, 60°, 64°, 60°; of the soil, 70°; this being too low for their successful growth.

10th. The plants of the last sowing, up to-day; look healthier than the first, from their longer time of vegetating. The temperature of the open air being moderate, (above 32°), and the weather fine, more air was given; the plants acquiring more strength and vigor every day.

14th. Added four barrows of manure to the pit to-day: Temperature, 64°, 65°, 63°; of the soil, 75°. Cucumbers of the first sowing, show their rough leaves.

17th. Heat brisker, and more air admitted. Temperature, 66°, 66°, 64°. The plants being in a vigorous state of growth, a barrow of soil, composed of two thirds leaf mould, and one third light loam, was added to the bed, and placed under the centre of each light, that it might become heated, and ready for hilling the plants into, in a day or two.

20th. Plants hilled out to-day. The soil was raised up to within eight inches of the glass; a hole sufficiently large to receive the plants was made in each hill, and turning them from the pots, very carefully, so as not to disturb the soil, were placed therein; the earth was drawn up round the stems of each, close to the seed leaves, as from the stems

roots proceed ; and the plants grow much more stocky and strong, and are less liable to damp off. A light sprinkling of water should be given, and the sashes closed, that a gentle steam may be generated, which will greatly refresh the plants. This operation should be performed in the middle of the afternoon of a fair day.

24th. The sudden change of the weather since yesterday, has caused a decline of the heat in the bed, and four barrows of fresh manure were added to-day ; the ends of the roots of the plants having protruded through the soil, and shown themselves on the surface, more earth was drawn up round the hills, and the plants sparingly watered. Temperature, 60°, 60°, 60° ; of the soil 70°.

27th. The second rough leaves of the plants begin to show themselves to-day ; the heat of the bed having become very brisk, since the addition of the last manure, the plants are growing rapidly ; the weather being more moderate, considerable air was admitted. The pan for containing water should be kept constantly filled, ready for use.

March 1st. During the last month the covering was taken off of the bed, between nine and ten o'clock in the morning, according to the severity of the weather ; but oftener at the latter than at the former hour ; it was also covered up as soon as the sun's rays left the sashes. During this month, the sun shining with greater power, it should be uncovered as early as nine o'clock in the morning, the former, and at half past eight, the latter, part of the month, and should be covered in the afternoon, as early as five o'clock in the former, and at half past five the latter, part of the month. A quantity of leaf mould and loam should, on the first opportunity, be collected together, and in readiness to earth round the plants. No kind of soil answers so well for cucumbers, during the first month of their growth, as decayed leaves ; indeed, we have seen it alone recommended as the best throughout the growth of the plants, from the sowing of the seed to the maturing of the fruit : we have, however, always found that the plants run too much to vines in such a soil, and, although the fruit was the largest, of the deepest tint of green, and in every way superior, both as regards appearance and quality, still we believe a small portion of light loam added to the above named soil, when the plants have been hilled out a week or two, renders the vines more prolific of fruit, and less luxuriant and rapid in their growth. We have measured leaves on our vines *fifteen inches* in diameter. We once had the pleasure of showing our plants, when in a vigorous state of growth, to an excellent practical gardener, who had grown cucumbers for many years ; he appeared astonished at their luxuriance,

and hinted that some extraordinary pains had been taken with them; the soil showed for itself, and pure water alone had been made use of; but so certain was our friend that they had received *stronger food*, that, although we most positively averred such was not the fact, we could not convince him to the contrary, and he left us firm in his own suspicions.

The plants were all topped at the first joint, at this time; this is an operation upon which there is a variety of opinions; some stating that it injures the vines, without attaining the end in view; others that they are benefited in a great degree; some, that it is a matter of little consequence, neither forwarding nor retarding the forcing; and others, that the period of producing fruit is materially shortened. The object of the operation is to keep the plants from running too much to vines,—thus filling the bed without producing fruit,—and to render them at once fruitful, by forcing them to throw out, first, blossoms, and afterwards runners. We have tried both methods, as well as the experiment of pinching off some plants at the first, some at the second, and some at the third joint: as regards the three latter modes, there is but a slight difference; indeed, at the first or second joint, none; but to let the plants grow without stopping them at all, we have found a very bad practice, and one which we cannot too strongly guard the young practitioner against pursuing. We would here suggest to those, who would wish to satisfy themselves fully upon this subject, the propriety of instituting a series of experiments, which may be thus performed:—Let four hills of plants be taken; pinch off the plants in one hill, at the first joint; in the second, at the second joint; the third at the third joint; and in the fourth, let the plants take their own course: when they come into blossom, let the time be noted down, as, also, when they come into fruit; this will give a correct and satisfactory view of the practice. It is from such observation that we are enabled to state actual results. There has been so much written upon this seemingly trifling subject, and so much doubt still exists, with many gardeners, that we have been thus particular in our remarks. Temperature, 68°, 72°, 68°; of the soil, 78°.

5th. The weather becoming more mild, the bed retains the heat; the plants are daily sprinkled with water warmed to the temperature of the bed, and the sashes shut down early in the afternoon, in order to cause the steam to rise, as this greatly refreshes the plants. There is no better sign that they are in a flourishing state, than when, on opening the sashes in the morning, small drops of water stand on the edges of the leaves; when this is not perceived, the air is

not moist enough, and a slight sprinkling of water should be given, upon closing the sashes at night. The plants, till the middle of the month, should be watered about 10 o'clock in the morning. Temperature, 68°, 80°, 68°.

7th. A barrow full of soil (leaf mould and loam) was added to-day: the roots again showing themselves on the surface of the hills, as soon as it became well warmed, it was drawn up over them: the plants look strong, and now require considerable water. Temperature, 66°, 68°, 66°.

10th. To-day, three barrows of the old manure were taken out, and three of fresh added in the room. The plants have now attained a good size, and begin to show flower buds. More soil was drawn over the surface of the hills, and the plants watered more freely. Temperature, 62°, 78° 70°; of the soil, 80°.

13th. Weather continues moderate; the heat of the bed very brisk, since the addition of the last manure. More soil was added, to be in readiness to earth round the plants: it is very important that this should, as well as all soil that is added, be put in three or four days before wanted for use; always placing it near the back of the bed, in order that it may be easier warmed, the sun shining with its full force upon it. The moisture is sooner evaporated, than it would be in the front of the bed; and as, early in the season, it often happens that it cannot be procured only in a very wet state, it is desirable to place it in this situation. Temperature, 66°, 82°, 70°; of the soil, 85°.

17th. Heat still continues rather brisk, and the plants are growing very finely. The roots again showing themselves on the surface of the hills, the soil was drawn over them, which was placed in the bed three or four days since. The object in hilling up the plants from time to time, as well as the addition of soil to the bed at different periods, rather than adding all at once, is to prevent dampness, and a diminution of heat from the quantity of moisture which the soil would contain. The plants now require considerable water, which should be given, from time to time, as soon as the sun's rays leave the sashes. Temperature, 65°, 65°, 63°; of the soil, 70°.

20th. The inclemency of the weather, the last three days, has caused the heat of the bed to abate considerably, and, in consequence, two barrows of old manure were removed, and three of fresh added. We would here mention, that, when fresh manure is added, it should be in a moist state: to put it in, as it is frequently taken away from the stable heap, in a *dry* heat, is a very injudicious practice, and should be carefully avoided. When, however, no other is at hand, the barrows full, as they are taken to the bed,

should have two or three pails of water added to each, and the whole, when thrown into the pit, well forked together. We have occasionally opened the doors, and thrown in several pails of water, and after the whole was well forked up, the heat would be brisk for four or five days. This should not be forgotten, as it is a saving of considerable manure, where it is not easily to be had, but is brought from a considerable distance.

23d. Heat very brisk. Temperature, 69°, 86°, 76°; of the soil, 85°. Plants in a vigorous condition, and some flower buds almost expanded. A barrow full of compost of the same kind as before used was added to the bed. Water freely supplied to the plants in fine weather. Some small pegs must now be prepared, to fasten down the vines, as they proceed in growth; this practice is very beneficial to the successful cultivation of the cucumber, as, in the latter part of the forcing, when the vines have filled the bed, the roots, which are thrown out into the soil at every joint, where pegged down, greatly assist in giving additional food and nourishment to the plants as they extend. The old portion of the vines near the root sometimes becomes canker, and in particular when this is the case, the fibres at the joints afford that support which is cut off from the main roots. These pegs may be made of any small pieces of brush, by taking the part where the branches fork out. Use one at every joint.

27th. The weather has become very moderate; the thermometer, in the open air, indicating 70°. The heat of the bed has been well retained, and less covering at night required. The roots of the vines have again appeared, and the soil was drawn round the hills to the thickness of about three inches, fully covering all the extreme fibres of the roots: it is astonishing with what rapidity they now extend themselves: we have seen them run through a thickness of soil of one inch during the night. One or two staminate (or male) blossoms opened to-day, and several buds, with embryo fruit, are nearly ready to expand. Temperature, 70°, 76°, 70°; of the soil, 82°.

30th. Removed three barrows of manure, and added three of fresh. The pistillate (or female) flowers, those which show the embryo fruit, have opened to-day, and the operation of "setting the fruit," as it is generally termed, was performed. The propriety of this operation having been disputed by many, and as there are various opinions respecting its usefulness, we intend to make some remarks in relation to it; but, as we have extended this communication to a greater length than we expected, or than we have space, at the present time, we leave it until a future opportunity.

(To be continued.)

ART. II. *Results of the Culture of some of the New Varieties of Strawberries, recently introduced into this Country ; with the Method adopted.* By the Hon. E. Vose. Dorchester, Mass.

A good many persons having attempted the cultivation of the new large growing kinds of strawberries, with very various success, I will, agreeably to your request, state the results of my own experiments with some of them, and of which you have, I believe, seen specimens of the fruit, which have at different times been exhibited at the Horticultural Shows.

The Downton, or Knight's Seedling.—This variety, almost every one knows, was produced from seed, by the venerable Mr. Knight, President of the London Horticultural Society ; and first introduced to notice in this country, I believe, by S. G. Perkins, Esq.

The soil upon which my strawberry plat is situated, is constituted of a light mellow loam, resting upon a sandy sub-soil ; somewhat sheltered from the north-west. In the latter part of August, suitable preparation having been made, old rotten manure, to the depth of three inches, was turned in to the full depth of the spade ; and the beds lined out, so as to leave the rows *twenty* inches asunder, and the plants *fourteen* inches from each other in the rows, placed in the quincuncial order. Before the severe frosts set in, they were covered slightly with leaves, and a little old manure thrown on top, to prevent their being blown away. Scarcely a plant suffered through the winter, and the first year, the stools consisting of single plants, the quantity of fruit was small ; many of the berries were however quite large, and of the coxcomb shape. The next season, the stools had become well established ; and in April the leaves and manure, with which they had been covered, were pointed in, and the beds dressed. When coming into bloom, and before the fruit had set, the spaces between the rows, and between the stools, were wholly covered with newly mowed grass, cut from the banks and the turf edges round the walks. This was used as a substitute for, and in preference to, straw ; it is more easily arranged about the stools ; and it is readily obtained, as it is required about the period when you wish to crop the banks the first time. "Grass cut from lawns," is recently recommended in London's Magazine for the same purpose ; although it is not many years since, that Sir Joseph Banks advised a return to the old practice of the use of straw, (from which this fruit has derived its name) as preferable to the many contrivances of

trenches between the rows, boards laid lengthwise, and tiles, which had been substituted for the same object.

As it is possible that every person who may be about planting a strawberry bed, may not be aware of the uses of the grass, I will allude to them. In the first place, it protects the plants against drought, by shading their roots from the sun's rays, and also by resisting the escape of the moisture, which would otherwise evaporate into the atmosphere. Of all the large sorts, the *scapes*, or stems, are too feeble to support the fruit, when ripe, in an upright position, consequently, all that which grows on the outside of the stools, falls into the soil, and is, of course, spoiled; heavy showers, too, beat up the soil, over much of the fruit, and make it *gritty*. When the beds are dressed in the spring, it is desirable not to disturb them till the crop is gathered, and the grass serves to keep the weeds down. It is said also to prevent the attack of slugs, as they cannot pass over it.

This was properly the first bearing year, and nothing could look finer than the vines when in fruit: the crop was abundant; many of the berries were of the coxcomb form, and some of them assuming circular and fanciful shapes, with the *calyx* nearly invisible in the centre.

After the fruit season had passed, the grass was removed, and the vines were permitted to extend themselves, and such of the runners as had not been used, were dug in, before covering in the autumn, so as to keep the stools entirely distinct.

The next year, the stools having increased in size, the quantity of fruit was greater in proportion; the berries, however, were much more generally conical in shape. The third season, which was the last, the product was fully equal to the previous one.

The flavor of this variety being equal to the smaller sorts, and the flesh finer and more delicate than any of larger ones, it is, on all accounts, entitled to a preference over any of the new varieties which I have cultivated.

It is important, however, with the Downton, in making a bed, that the runners be all taken from fruitful plants, bearing as it does, its *staminate* and *pistillate* flowers on different roots: there is danger of obtaining some that are called *males*, which are entirely useless, and exhaust the soil to no purpose; and as they are not weakened by the production of fruit, the runners extend themselves much more rapidly than the others. It is not long since, that, in England, it was thought necessary, in planting, to apportion *one* sterile to about *ten* fruitful plants; but this opinion is exploded, and now all but the fruitful ones are carefully avoided; nor is it necessary to wait for the flower to determine them; the difference

is perceptible in the foliage, that of the sterile being much more rank and coarse.

Wilmot's Superb.—This variety, which has excited so much admiration in Europe, treated in the same mode as the *Downton* (I have, in fact, employed the same method with all the large sorts which I have attempted to cultivate), was abandoned, after the second year; the product being so small as not to warrant farther trial.

Keen's Seedling.—This has succeeded well; it is a good bearer, and of fine flavor; not quite equal to the *Downton*, in either point; but its large, dark rich berries are altogether a beautiful fruit, and it well deserves cultivation.

The last season, an individual at East Cambridge produced an abundant crop, and larger fruit than I have ever before seen of this variety; whilst other persons, experienced cultivators too, have given up this, as well as the *Downton*, after a trial, for want of success. In the cases of failure, there seems to have been one radical error; that is, the plants have been placed upon strong, rich garden soils, and often somewhat moist: whether such soils are too adhesive to permit the fibres sufficiently to extend themselves; or the nutriment which the plant absorbs, be unfit to form the basis of fruit, is a matter of mere theory, which is of no importance, so long as the facts which the results exhibit are before us, and which have been, as far as my own observations have extended to such situations, a profusion of foliage, but little or no fruit.

Methven Castle, or *Methven Scarlet*.—This strawberry, more hardy than any of the large kinds, is very prolific; but the fruit is somewhat spongy in the centre, and it has not the fine flavor of some other sorts; still the magnificent appearance of its enormously large globular berries, renders it a desirable object of cultivation to a certain extent. The question has often been agitated, as to the comparative merits of these new large varieties, with some of the older and smaller ones. With all the *smaller* fruits, size and appearance, certainly weigh a great deal in the estimate of their value; and almost every cultivator would be desirous of growing a proportion of the fine large sorts; and, with proper management, they would unquestionably well repay him; still it is not to be denied that they require to be treated with a *good deal more care and attention*, than the small ones, to expect success. Of the latter kinds, I have made trial of several varieties, among which the

Early Virginia or *Early Scarlet*, is a valuable one: it is of fine flavor, produces a fair crop, and as it serves to lengthen out the season of this delicious fruit, it is well worthy of cultivation. It comes into bearing ten days earlier than any other variety.

Wood Strawberry.—This old variety has excellent properties: if well cultivated, a greater crop may be obtained from the same space, than of any other kind: the period of its ripening is of long duration: it may be cultivated with as little labor, and it will produce well for three successive years, on beds running into mats.—With this, as with all other fruits, the red is of higher flavor than the white.

Alpine.—This old variety may be managed very similarly to the *Wood*: it has been sometimes recommended to cultivate it by seed, as a preferable mode to using the runners; but it is believed without much reason. I once attempted it with the *White Alpine without runners*; the seed, thought to be very choice, was received from the Horticultural Society of Paris. The plants were brought forward in a frame, and, at a proper period, they were transplanted: the stools enlarge themselves by offsets, and, like all this variety, it continued bearing till into autumn. Its extremely long and slender fruit had nothing peculiar in its flavor, nor did it seem to be worthy of cultivation, farther than as a matter of variety.

It is desirable, in a private garden, to make a new bed annually, which will enable the cultivator to turn in an old one at the same time, and still keep up a succession; as the strawberry is a great exhauster of the soil, the ground occupied by the old bed should be appropriated to some other crop.

Some distinguished cultivators have recommended burning the vines; in the spring, they put on a covering of dry straw, an inch in thickness, and set on fire different portions of the same bed at three different periods. It is said to lengthen out the succession of the crop, and that the product is much larger. I have had no experience in this practice. The results of the exertions which have been made in this vicinity, within a few years, to improve the cultivation of this fruit, are very apparent, as seen in the increased quantities which the market of the metropolis affords, as well as in the introduction from England, of those large and splendid varieties, which, till very recently, were unknown, even in that country; and when it is recollected that the English catalogues now contain over *one hundred* distinct varieties, and that they are constantly increasing, and that such are the facilities with which new and valuable fruits are now obtained from abroad, it may reasonably be expected that the number of choice varieties will not only be augmented, but that the period is not distant, when a fruit, which is as universally a favorite as it is simple and harmless in the use, will be produced in quantities more commensurate with the wants of the community.

Dorchester, Feb. 15, 1836.

E. VOSE.

ART. III. *Observations on the Camellia, and its Varieties, with some Account of its Introduction into Great Britain and this Country.* By M. P. WILDER.

(Continued from p. 22.)

15. *Camellia japonica imbricata.* *Hort. Soc. Trans.*

Crimson Shell, or Imbricated Japanese Camellia.

This variety was introduced into England in 1824, from China, and is not surpassed by any that have ever been imported from that country. The drawing in *Chandler and Booth's Illustrations* of the camellia, represents it as a beautiful crimson color, and every petal cupped or imbricated, while that of the *Botanical Register* figures it as a pink, or delicate rose color, blotched and spotted with white; both descriptions, are, however, correct, it having flowered with me according to the former, and at Col. T. H. Perkins's, corresponding with the latter. This anomaly is accounted for, as in other camellias, by their sporting. The foliage of this variety is so peculiar that it cannot be mistaken for another; being larger, of a dark glossy green, and much recurved or undulated.

16. *Camellia japonica eximia.* *Catalogue of the Camellias of Bollwiller.*

This desirable camellia may justly be classed with those of first rate excellence. The flowers are of a most lovely rose color, from three and a half to four and a half inches, in diameter. The outer petals are arranged in three distinct rows, and are heart-shaped, or divided at the edge; the inner ones are smaller, and faintly striped, filling the centre with a loose and graceful tuft, after the style of the waratah. Of its origin I am unacquainted: the plant I have was received of the brothers Baumann, of Bollwiller, in whose collection only, have I heard of it.

17. *Camellia japonica eximia.* *Chandler & Booth's Ill.*

Choice Japanese Camellia.

Nothing can exceed the beauty of this variety: the formation of the flower is almost precisely like the double white, the size larger, and of a deep rose crimson color. The petals are very numerous, and regularly arranged over each other in concentric circles to the centre. This camellia was raised from seed of the waratah, by the Messrs. Chandler, in 1819, and brought to notice in 1830, and has been, until the present time, a very costly variety. The foliage of the present subject and the *French eximia* are so similar, that even a careful observer would take them for one and the same variety.

18. *Caméllia japonica élégans.* *Chandler & Booth's Ill.*
Chandler's Elegant Japanese Camellia.

For this variety, also, we are indebted to the Messrs. Chandler, who raised it from seed of the waratah. It made its first appearance about 1830, and has been in high reputation ever since. The flower is of a very clear vivid rose color. The exterior petals are quite large and expanded; the inner ones smaller, filling the centre, and making a somewhat irregular, but beautiful formed flower. No collection should be without it.

19. *Caméllia japonica élégans.* *Catalogue of the Camellias of Bollwiller.*

A semi-double pink, or red flower, of only middling or ordinary character.

20. *Caméllia japonica corállina.* *Chandler & Booth's Ill.*
Coral-colored Japanese Camellia.

This is another seedling produced by the Messrs. Chandler. The flowers are not large, but exceeding neat in their formation; they are of a deep rich crimson color, inclining to a purple from the darkness of its hue, and frequently a little spotted with white. The petals are not numerous, the exterior ones being large, and the inner ones small, interspersed with a few of the stamens. Its parent was the waratah, and was first brought into public notice about 1825.

21. *Caméllia japonica corállina.* *Catalogue of the Camellias of Bollwiller.*

This camellia is in no way inferior to the English corállina; the color of the flower is however different, this being a bright rose. The guard petals are in two or three rows, and bell-shaped, the inner ones smaller and irregular, forming a loose cone in the centre. It is a free growing variety, and an abundant bloomer.

22. *Caméllia japonica Chandléri.* *Chandler & Booth's Ill.*
Mr. Chandler's Japanese Camellia.

This beautiful variety was also raised by the Messrs. Chandler, and whose name it bears. The color of the flower is a very brilliant crimson, and generally splashed with white; it is of middling size, about three and a half inches in diameter, and of the waratah formation; there are three or four rows of large crown petals, and the centre of the flower is filled with a compact mass of smaller ones. The plant is of very vigorous growth, the foliage large and flat, and is much inclined to sport. It is not unfrequent to notice on the same plant, a plain crimson flower, and others that are more or less spotted with white.

23. *Camellia japonica splendens*. *Chandler & Booth's Illus.*
Coccinea. Lodd. *Bot. Cabinet*.
Coccinea of the French.

This is little more than a semi-double variety; but the perfectly neat arrangement of its petals make it a very showy and desirable sort. The color of the flower is a bright crimson, and is composed of about fifteen large round, and a few small, petals. It was raised by Mr. Alnutt, and is frequently called Alnutt's *splendens*.

24. *Camellia japonica Róssi*. *Loudon's Hortus Britannicus*.
Mr. Ross's Camellia.

I have observed, in another place [Vol. 1, p. 15,] that this was the first seedling *camellia* exhibited at the London Horticultural Society. It was raised by Mr. Ross, of Stoke Newington, in 1824, and for which he received a medal. The flowers are above the ordinary size, of a brilliant crimson color; the outer petals being in three rows, the inner ones filling the centre in a cluster, and sometimes faintly striped with white. It is said, in the *Illustrations of Camellias*, to bear a strong resemblance in the shape of the flower to the English *C. élegans*.

25. *Camellia japonica punctata*. *Botanical Register*.
Gray's Invincible of some collections.
Punctata plèna of the French catalogues.

This and the two following varieties were produced from seed, by Mr. Press, of Hornsey, England; and made their first appearance about 1827. They are the offspring of the semi-double red, crossed by the single white, and were all contained in the same capsule. The flower is of medium size, the formation like the pomponne, but more compact and beautiful. It is of a light blush or flesh color, thickly striped and spotted with pink; the appearance not unlike what it would be were it sprinkled with red ink. The plant is of free growth, the foliage a very dark green, blooms freely, and seldom if ever produces a bad or inferior flower.

26. *Camellia japonica eclipsis*. *Chandler & Booth's Ill.*
Press's Eclipse.
Regina gallicarum of the French.
Splendida of some collections.

The formation and style of this flower is much like the foregoing, except that the ground color of this is a pure white, and faintly striped, but not so much spotted with pink. It is a free grower, but not so free a bloomer as *punctata*. The foliage is of a pale yellowish green, and by this is easily distinguished from most other varieties.

27. *Caméllia japónica Ròsa múndi*. *Loudon's Hort. Brit.*
Rose of the World.
Venusta of some collections.

The foliage of *Ròsa múndi* is similar to *punctàta*, its twin brother, the colors of the flower being the same, but more blended and indistinct; the size smaller, and the form not so good. It has one or two rows of guard petals and a waratah centre. It is, however, a desirable kind.

28. *Caméllia japónica Elphinstòni*. *Chand. & Booth's Il.*

This English seedling was raised by Mr. Joseph Knight, King's Road, Chelsea, England, some years since. The habit of the plant is erect and thrifty, the foliage thin, flexible, dark green, and shining. The flower is of a rosy crimson color, and blotched with white, bearing a strong resemblance to *C. Chandlèri*, and quite as beautiful.

29. *Caméllia japónica, anemoneflòra álba*. *Chan. & Booth's Il.*
White Waratah Camellia.

This camellia is another of the seedlings produced by the Messrs. Chandler. Its parent was *Pompònia*, and which it resembles, both in color and form. The flower is, however, larger, and usually with one or more lines or splashes of pink, and has sometimes a whole petal of the same color. The foliage is very dark and shining, regularly recurved, deeply veined, and bears a strong resemblance to the celebrated *C. Colvillii*.

Yours, M. P. WILDER.

Dorchester, Jan. 1836.

(*To be continued.*)

ART. IV. *Descriptive Notice of J. W. Knevels, Esq.'s Collection of Exotic Plants at Newburgh, N. Y.* By A. J. D.

THE truly superb collection, now in possession of this gentleman, is the largest amateur collection in the State of New York, and, considered with regard to its richness in tropical plants and the individual beauty of many of its specimens, we do not hesitate to pronounce it unsurpassed in the Union. All the fine exotics formerly belonging to J. B. Smith, Esq., of Philadelphia, and noticed in this Magazine (Vol. I, p. 165), were purchased by Mr. Knevels, and form

the mass of the collection now at Newburgh; but it has also been enriched with a great number of the choicest and rarest specimens, in addition, from the different gardens and nurseries in this and other States. Some idea may be formed of the ardor and enthusiasm of Mr. Knevels as an amateur, when we mention that the whole of these plants have been selected and transported here under his own direction during the short space of the past five months. The large structures which now contain them, have also been built since the first of September, and recollecting this, we were certainly much surprised and delighted to find the plants now (Feb. 1st) in such a very vigorous and healthy state.

The first house we entered, thirty feet in length, was, with the exception of a small stage in front, devoted entirely to a very rich collection of camellias. About eight hundred plants, of different sizes, from small newly inarched ones nearest the walk, to trees of eight or nine feet in height, at the top of the stage, exhibited a dense mass of dark green foliage, already enriched by many splendid flowers, and showing a great quantity of buds. Three or four superb plants of the double white, eight feet in height, very handsomely formed, and well clothed with foliage, were loaded with bloom. We noticed an individual with flowers almost yellow, which was labelled *álba lutescens*. It is, we believe, the *luteo-álba* of the English catalogues. Lady Hume's blush and the rosy *pæoniflora* were also blooming in profusion, on very large plants, each of which showed more than fifty expanded flowers. Mr. Knevels also pointed out to us a specimen marked *pæonæflora álba*, which he thought different from *pompone-álba* [?], of which a plant was opening many of its fine white flowers, marked with narrow pencilings of crimson. *C. crassinervis* was in full bloom. It is much like the *anemoneflora*, but the flowers continue in beauty much longer. *C. Woodsii* was swelling several very large buds. *C. sanguinea*, though single, is, to our taste, a very splendid camellia: some flowers were open here, and the intense rich crimson of the petals, contrasting with the bright golden color of the stamens, was very striking. There are about one hundred and fifty fine kinds in the collection, among which we noticed the following choice ones, many of which will flower the present winter:—*C. reticulata*, *Colvillii*, *eximia*, *speciosa*, *imbricata*, *splendens*, *pulcherrima*, *rosea*, *Wiltoni*, *Fairlea*, *Lindbri*, Gray's eclipse and invincible. There are also a large number of the finest varieties, imported from France, many of which have not yet produced flowers. But the most attractive camellia, to our eyes, was a beautiful *seedling*, the first flower of which had just fully expanded. Though not so large, it was very similar,

in the form and arrangement of its petals, to *C. imbricatâ*, while the color was the most exquisite rose, something similar, but more delicate and beautiful, than *C. myrtifolia*. The foliage is also large and fine, and this charming new variety will be prized as a valuable addition to this splendid genus of plants. There are a number of very promising seedlings, and we were shown the drawing of a superb one, which flowered last winter while the plant was in Pennsylvania.

As we were passing out, we observed a beautiful green tea, six or seven feet high, a tree which we have no doubt will, in time, become perfectly naturalized in the Southern States, though we fear it will be a longer period before the low price of labor in this country will enable us to compete profitably with the Chinese, in the preparation of its leaves for market.

Leaving this structure, we next proceeded to the greenhouse, which includes the half of another building, the remaining part of the range being occupied with hot-house plants. We were immediately struck with the great profusion of fruit of the orange tribe with which the trees were loaded. A number of these trees were the largest and finest specimens we have seen in the country. They once formed part of the collection of Mr. Hamilton, near Philadelphia, the most celebrated in the States immediately after the revolution, and some of them are of great age, but nevertheless continue in the most vigorous and fruitful state. We observed two large trees of the shaddock, and a fine one of the citron, bearing their large and showy fruit. Mr. Knevels directed our attention to a seedling tree full of fruit, which, he stated, was raised by Mr. Smith from a seed of the lime. It had the appearance of the lemon, though the skin was rather darker colored and more rugose than the common variety of that species; on tasting it, however, we found it to be decidedly a lemon. If this tree therefore was raised from seed of the lime, which we have every reason to believe, it goes to prove, as some botanists have long asserted, that the lime is not a distant species, as is generally believed, but only a variety of the lemon, (*Citrus limonium*). A tree of the Mandarin orange (*C. nobilis*), was plentifully laden with the very pretty fruit of that species. We noticed also a small tree of the variety, called by the French the *Bouquet* orange. The flowers and fruit are borne in clusters. The latter are quite singular in their appearance and grow sessile upon the branches. Among other varieties we also remarked the finger orange, the curious fruit of which resembles a hand with the fingers spread open; but the partially grown oranges had fallen during transportation hither.

By the side of one of the columns was growing a plant of *Eucalyptus saligna*, ten or twelve feet high, (which we had before seen ornamenting Col. Carr's large green-house, in the Bartram Botanic Garden, Pa.) It has produced flowers the present season, and the pendent branches, the leaves of which have a peculiar fragrance, have an effect, in a large specimen, very similar to those of the weeping willow. The Japan loquat had numerous clusters of ripening fruit. Large plants of the crimson and white corrollæd *Rhododéndron arbóreum*, will be profusely covered with bloom towards spring. There is a fine plant or two, among other species, of *R. hybridum*, which is a very superb sort. *Metrosidéros lanceolata* var. *semperflórens*, and *Sparniánnia africána*, were in blossom. Several acacias, both here and in the hot-house, were full of buds. That pretty, free flowering plant, *Linum trigynum*, was covered with yellow flowers, and we observed some seedling Chinese primroses of both colors, with *fringed* edges. We were delighted to find this species breaking out into a new variety, because we have no doubt that, by impregnation with the other richer colored species of the same genus, some beautiful hybrids may be produced, retaining all the delicate and ever blooming habits of their parent. Several *Oxalidæ* were in blossom, and we observed a great quantity of *ixias*, *wachendorfias*, *lachenalias*, *Gladiòli* and other Cape bulbs shooting up vigorously, and some of them beginning to produce spikes of flowers.

Opening the door of the hot-house, we were strongly impressed with the magnificence of the different *palms*, which here tower above the rest of their neighbors. Directly before us was a noble specimen of the great Tallipot palm of Ceylon, (*Córypha umbraculifera*), the leaves or fronds of which, including the petioles, were seven or eight feet in length. The superb fan-like foliage, and *tout ensemble* of this plant, give it, in our estimation, that præminence among its congeners, which its name, *κορυφή*, would seem to imply. There was an equally remarkable specimen of *Latánia bourbónica* (the Bourbon palm), and very splendid plants of *Oreodóxia régia*, *Phœnix dactylifera* (the date palm), and *Cocos nucifera* (the cocoa-nut). From amidst a number of smaller palms, we noticed *Thrinax parviflora*, and *élegans* [?]; and two or three species of *Acrocoma*.

Nearly related to the palms in appearance, if not in structure, is the natural order *Cycadææ*. Of this we observed four very striking plants of the Japanese sago palm, (*Cycas revolúta*) the stems of two of which, measured each nearly three feet in circumference, with fronds at the summit proportionably large. We never look at a large specimen of this truly fine plant, without calling to mind the columns of

some of the ancient Egyptian temples, which the symmetrical trunk seems to us to resemble, while the regular and architectural-like fronds at the top, may not unaptly be compared to some of the sculptured capitals of those columns. Still rarer was an elegant plant of *Cycas circinalis*, the foliage of which is of a lighter hue than the former, and those very singular vegetables, *Zamia horrida* and *cycadifolia*.

We believe that Mr. Knevels is rather a botanical, than a floral amateur; and we are gratified to observe it, because, though a less common, it is, in our opinion, a more refined, as it is a more scientific taste. Where there will be one individual who will possess sufficient knowledge to appreciate and cultivate the palms, and their rarer tribes of vegetation, there will be fifty who can admire and enjoy a beautiful bed of tulips, or a handsome collection of camellias. Notwithstanding this, we believe that a person who appreciates the majestic beauty of a fine palm, derives more satisfaction from the contemplation of that object, than from four times the space which it would occupy in the hot-house, if filled with more gaudy blossoming, more common and more *ephemeral* beauties.

Holtzia coccinea, with a profusion of scarlet, and *Justicia speciosa* with purple, flowers, have been blossoming abundantly all winter. There is a great quantity of *Amaryllideæ* here, but only *A. venosa* was in bloom in the hot-house. *Crinum amabile*, however, one of the largest of the tribe, has thrown up a huge flower stem of the length, and nearly the thickness of a man's arm, upon the extremity of which, the immense buds were swelling into bloom. It is astonishing how much this plant will bloom in a season when properly treated. *Doryanthes excelsa*, a singular member of this order, from N. S. Wales, has attained considerable size. We believe it is yet very rare in this country.

Dianella cærulea showed a cluster of blossoms, and *Pourrettia æranthos*, a bromeliaceous plant, had just expanded a spike of pretty deep purple flowers. The scarlet bracteæ of *Euphorbia Poinsettii*, were also very showy among the green foliage. *Strelitzia reginæ*, was full of buds, and we observed *S. ovata* and *S. juncea*, the curious long rush-like leaves of which, growing upon a plant four or five feet high, attracted our attention. Two noble plants of *Urânia speciosa*, and a large tree—the largest in the country—of *Dillenia speciosa*, formerly in the possession of M. D'Arras, of Philadelphia, and for which we have understood fifteen guineas have been offered and refused, were very striking ornaments of a portion of the stage. The latter tree has never yet bloomed in America, but we may possibly soon anticipate flowers from this specimen. *Astrapæa Wallichii* is also of large

size here, and we observed a plant of that splendid Madagascar shrub, figured in the Botanical Magazine, *Poinciàna régia*.

Among the *Cácti* we noticed *C. grandiflorus* covering thirty feet of the back wall of one of the houses. A new species, *Echinocactus Eyrièsi* [noticed Vol. I, p. 378], was also shown us. It is said to blossom like the night-blooming cereus, opening its delicately scented white flowers, six inches in length, in the evening. It is quite rare, and was received from France. There is a specimen here of the Hottentots-bread (*Testudinària elephántipes*.) Its large fleshy roots look nearly twice the size of a man's head,—a grotesque appearance among the more succulent and verdant plants. The inner part of the root is sometimes made use of as a bread-stuff in South Africa.

Plumiera álba and *rùbra*, *Ficus bengalénsis*, and the camphor tree (*Laúrus camphóra*), have attained a large size in this collection. The latter showed flowers upon a plant ten feet high. There is also a specimen fifteen or sixteen feet in height of *Carolinea prínceps*, a member of that noble family the *Bombacèe*. *Coffea arábica*, was full of berries, and among a great number of tropical fruits, to which Mr. Knevels appears very much attached, we noted the bread-fruit tree (*Artocárpus integrifolia*), the Alligator pear (*Laúrus pérsea*) *A'chras sapòta*, *Euphòria Litchi*, *Jambòsa vulgàris*, and the different *psidium*s, among which was a tall fruiting plant of *P. Cattleyànum*. Cattley's guava is a very fine fruit: we tasted some delicious ones ripened in the houses of Dr. Hosack, at Hyde Park, the past season, which had attained their flavor very perfectly. It is so easily grown that we do not hesitate to recommend it to all lovers of tropical fruits as a delicate addition to the dessert. *Ficus répens*, departing from the usual habits of the genus, was creeping up the back wall, attaching itself firmly in the same manner as the trumpet creeper. There are many others of the genus here, of large size, of which we recollect *F. religòsa*, *popúlnea*, *coriàcea* and *elástica*. The latter, commonly known as the India rubber, is the very fine tree which many of your readers may have formerly seen decorating the conservatory of the Messrs. Thorburn, New York.

Dracèna férrea, *marginàta*, *austràlis* and *fràgrans* are in a flourishing state in this house. *D. férrea* (the purple dragon plant) had thrown up a flowering stem. This genus is interesting to us as having given rise, through the observations made upon its growth by Du Petit Thouars, in the Isle of France, (where it is planted for hedges), to the ingenious theory, developed by that celebrated botanist, of the *formation of wood* by the roots of the buds, which he considered as

distinct individuals, each *rooting* in the parent trunk, and forming, by its elongation upwards, new branches, and downwards, wood and bark.

Mr. Knevels's garden is yet new, and, being situated immediately in the suburbs of the village, is comparatively limited in its extent; but we anticipate every thing from the knowledge and experience of his excellent German gardener, than can be effected by industry and intelligence, aided by the personal taste of his employer.

A. J. D.

ART. IV. *Notices of new and beautiful Plants figured in the London Floricultural and Botanical Magazines; with some Account of those which it would be desirable to introduce into our Gardens.*

Edwards's Botanical Register, or Ornamental Flower Garden and Shrubbery. Each number containing eight figures of Plants and Shrubs. In monthly numbers, 4s. colored, 3s. plain. Edited by John Lindley, Ph. D., F. R. S., L. S., and G. S., Professor of Botany in the University of London.

Curtis's Botanical Magazine, or Flower Garden Displayed, containing eight plates. In monthly numbers, 3s. 6d. colored, 3s. plain. Edited by William Jackson Hooker, L.L. D., F. R. A., and L. S., Regius Professor of Botany in the University of Glasgow.

DICOTYLEDONOUS, MONOPETALOUS, PLANTS.

XXII. Berberideæ.

EPIMEDIUM

diphyllum Loddiges' *Bot. Cab.*, t. 1858. Twin-leaved Epimedium. A low growing plant; flowering early in the spring; color of the flowers white; a native of Japan; introduced in 1834. *Bot. Mag.*, t. 3448.

A "rare plant," which flowered in the Botanic garden at Edinburgh, in 1834. The growth is extremely slender. The flowers appear in terminal racemes, expanding very irregularly, and numbering from three to six, on each. It was introduced from Berlin, in 1834. (*Bot. Mag.*, Nov.)

XXXII. Ternstromiæcæ.

CAMELLIA.

C. japonica elegans is now in splendid bloom in our collection; the flower measures four and a half inches across. We have never seen but one other flower of this superb variety, in this vicinity, and that was from the collection of Mr. Wilder of Hawthorn Grove, noticed at p. 23. It flower-

ed with us last season, but we were then uncertain of its true name ; since, however, we have seen that of Mr. Wilder's, we are perfectly satisfied that they are both one, and the same variety. *C. corallina* is also flowering in gorgeous beauty ; some of the petals are considerably blotched with white : we admire the style in which this variety expands, it being more like the common cabbage rose, than like any camellia ; the petals are not reflexed, as is general with other kinds, but are completely cup-shaped, and the flowers open at once, to the centre, exposing a few brilliant yellow anthers, which contrast admirably with the deep coral color of the handsomely formed petals. *C. eximia*, of the French catalogues, and *C. elegans* of the English are now in bloom at our garden : we noticed them at p. 23, and both were exhibited before the Horticultural Society. They were somewhat similar, but not sufficiently so to be considered synonymous. Those, however, which are in flower with us, convince us that they are one and the same kind. As it is subject to sport, undoubtedly it did, in the above case, which accounts for the difference. A notice of a beautiful new seedling, will be found in another page.

XLVI. *Cactææ.*

CEREUS (literally a torch or taper, translated by the English, torch thistle ; given to these plants in consequence of the upright kinds resembling the appearance of the tapers used in the ceremonies of the Roman Catholic religion).
triangularis Linn. *Sp. Pl.* 666 ; *Jacq. Amer.*, 152 ; *Haworth Synopsis*, 180 ; *Decandolle Prod.*
 Triangular Torch-Thistle. A stove plant (?) ; flowers white ; a native of Mexico. *Bot. Reg.*, t. 1807.

This is a rather common species, cultivated in our gardens under the name of *Cactus triangularis* ; but we have never seen a flower of it, and we infer, from what Dr. Lindley states, that it has never blossomed here, as in England, where it was introduced many years ago, it flowers so rarely that it "has never been represented from an European specimen" till the present time. This painting was taken from a flower which opened on a plant that had been grown upwards of fifteen years, in the collection of Sir George Staunton, Bart., at Leigh Park. near Havant, in September, 1834. Two flowers only were perfected : one of them was sent to London by coach immediately after it opened, and from it the drawing was made. It is said to have the largest flower of all the species, not even excepting the common night-blowing cereus. Dr. Lindley describes it as a "beautiful object, its petals of the most dazzling whiteness, the effect of which was greatly heightened by the dense mass of yellow stamens occupying the centre, and by the border of olive green sepals, on which the petals reposed." We hope to see it flower in our gardens. (*Bot. Reg.*, Nov.)

XLVII. *Onagrariæ*.

FUCHSIA.

In Loudon's Magazine for November, a correspondent gives some information respecting some species of this genus. *F. cónica*, *grácilis*, *tenella*, *virgata*, and many more varieties, it is stated, may be originated by fertilizing the stigmas of *coecinea* with the pollen of *arborescens*. All the Chilian species or varieties, will intermix with *arborescens*. But what is very singular, *arborescens* will not intermix with their pollen. *F. excorticata* crossed with either *cónica* or *globosa* will produce fac-similes of *F. discolor* (p. 59). Seedlings thus produced, it is said, will not flower until the second or third year.

F. longiflora is now called the "long-legged imposter," by the imposition which some persons have tried to practice upon the public with this species. "*Longepedunculata*," it is said, would have been a better, and a "less roguish," name. The writer states, for the information of those who are engaged in hybridizing plants, that, "*the pollen of most (perhaps all) plants is capable of maintaining its fertilizing properties for an indefinite space of time.*" It should be kept from moisture, and in a temperature above the freezing point (32°).

LX. *Proteacæ*.ISOPOGON *R. Brown*.

spathulatus *R. Brown* var. *linearis* *Hooker* Linear-leaved Isopogon. A green-house shrub; growing about two feet high; flowers pale purple; appearing in the spring; readily propagated by cuttings; a native of King George's Sound; introduced in 1830. *Bot. Mag.*, t. 3150.

This is a beautiful species of Isopogon, and although not so handsome as *I. Loudoni* is "deserving a place in every choice collection." Its growth is rather irregular. Leaves numerous, linear spathulate, thick, dark green. The flowers are disposed in numerous heads on the extreme points of the lateral branches, which the plant throws out in abundance. Flowers pale purple, in solitary sessile heads, thickly surrounded with leaves: it is a free bloomer. When this tribe shall be more appreciated in this country, it will be deemed a fine addition. Discovered by Mr. Baxter, in 1829. (*Bot. Mag.*, Nov.)

LXXIII. *Rosacæ*.

CRATÆGUS

Douglasii *Lindley*; *C. punctata* var. *brevispinia* *Douglas* in *Hook Fl. Bor. Am.* Mr. Douglas's Thorn. A hardy small tree, with white flowers; appearing in May; a native of north-west America. *Bot. Reg.*, t. 1810.

A neat and beautiful species, which Dr. Lindley believes "to be essentially different from all the published species of this genus." The whole of the synonymy, are, however, in great confusion, from the want of some monographer, and it is not certain, but this may have appeared in print under some other name. Mr. Douglas, who discovered it in north-west America, considered it only a variety of *punctata*,

but it is quite different. *C. macrantha* of the gardens, Dr. Lindley states, may not be specifically distinct. It is a fine addition to the species which now, with the varieties, amount to nearly sixty, and should be in every garden. The flowers appear in a cyme of medium size, and are very showy. The young shoots have a deep tinge of purple. (*Bot. Reg.*, Nov.)

DICOTYLEDONOUS, MONOPETALOUS, PLANTS.

CLXXII. *Vaccinææ*.

VACCINIUM

canadense Richardson. Canadian Whortleberry. A hardy dwarf shrub, with white flowers, tinged with pink; appearing in May; a native of North America. *Bot. Mag.*, t. 3446.

The plants from which this specimen was taken, were raised from seeds sent over by Mr. Drummond, during the second expedition of Capt. Sir John Franklin; they prove identical with the *V. canadense* of D. Richardson, who first discovered it, during Franklin's first expedition to this country: it is ornamental with its rosy white blossoms; and when a taste for planting arboretums shall be general in this country, this, as also all the other species, will be sought for. (*Bot. Mag.*, Nov.)

myrtilloides Michx. *V. angustifolium* Aiton Hort. Kew. Flask-flowered Whortleberry. A hardy shrub; growing a foot high; flowers white, tinged with red; appearing in May; a native of North America. *Bot. Mag.*, t. 3447.

A singular and rather ornamental species, extending in its geographical distribution from the Atlantic to the Pacific ocean. It was first discovered by Michaux in Canada, and subsequently by Mr. Menzies, on the North-West coast, by Mr. Douglas on the west side of the Rocky mountains, and lastly by the lamented Mr. Drummond on the Rocky mountains, lat. 62°, who introduced it to England. The flowers resemble somewhat in shape, *Erica ardens*, and are described as globose-urceolate. The fruit is highly esteemed. (*Bot. Mag.*, Nov.)

CLVII. *Begoniææ*.

BEGONIA

heracleifolia Schlecht et Cham. Cow-parsnip-leaved Begonia. A stove perennial (?); growing two (?) feet high; flowers pink; appearing in April and May; a native of Mexico. *Bot. Mag.*, t. 3444.

A splendid species of the *Begonia*. The leaves are seven inches across, and palmate. Bractææ in opposite pairs; flowers rose color. The panicle bears both male and female flowers, and from the number has an imposing appearance. It was discovered in Xalapa, and has been introduced to English gardens, by Mr. Otto of Berlin. (*Bot. Mag.*, Nov.)

CLXXV. *Lobeliææ*.

TUPA G. Don (The name Tupa is applied by the Indians of Chili to a species of this genus).

This is a new genus, constituted by Mr. G. Don, from spe-

cies which have heretofore been considered as belonging to *Lobelia*. The following are the characteristics of the genus *Tupa*: "calyx top-shaped five-toothed; corollas tube slit lengthwise on the upper side; the limb directed to one side, five-parted. Stamens monadelphous. Anthers coherent, the front two with a tuft of hairs at the tip. Stigma bearded beneath, of two lobes: capsule half superior, two-celled, many seeded, opening at the tip. Seeds elliptic, concave, smooth. The species heretofore known as *Lobelia Tupa* L. Bot. Mag., 2550, is now *T. Feuillæi* G. Don.

CCVII. *Primulacæ*.

PRIMULA

sibirica var. *integerrima* *Jacquin* P. *rotundifolia* *Pall.* P. *intermedia* *Lebebour*. Entire-leaved Siberian Primrose. A green-house plant; growing about a foot high; color of the flowers reddish lilac; appearing in March and April; introduced in 1832. Bot. Mag., t. 3445.

"A native of marshes among the Altai Mountains. Plants were received at the Edinburgh Botanic Garden from Mr. Goldie of Ayr, in 1832, and flowered freely in the cold frame and green-house in March and April, 1832. The plate represents the scapes (or flower stems,) each terminated with an umbel of reddish lilac blossoms, from three to five in each. (*Bot. Mag.* Nov.)

CCXI. *Scrophularineæ*.

CALCEOLARIA.

In Paxton's Magazine of Botany for November, is figured *C. corymbosa* var. *Jupiter*. It is one of the splendid kinds raised by the Messrs. Young, of the Epsom Nursery; and should be in every collection of plants. But as this tribe is so difficult to import, we fear it will be long before we shall be gratified with a display of the most rare and beautiful hybrids. This variety is herbaceous. The corollas are deep brown, inclining to crimson, with a yellow border.

CCXIII. *Solaneæ*.

PETUNIA.

A species named *linearis* *Herbert's M. S.*, is figured in the above work for November. It is the *Salpiglossis linearis* *Hooker* and *Nieremburgia intermedia* *Graham* and *D. Don*. It is a native of Buenos Ayres, where it was discovered in 1832. The foliage of the plant is very graceful, and the flowers, which resemble in shape *P. violacea*, though smaller, are of a rich crimson purple, with an orange colored centre. It is a profuse flowerer, and a valuable addition. We received seeds for this species last year, but they proved only a common species of *Nicotiana*.

CCXXI. *Labiataæ*.

GARDOQUA.

Gilliesii *Graham* G. *chilensis* *Bentham* Dr. *Gillies's Gardoqua*. A hardy, half-shrubby, herbaceous plant; growing about a foot high; color of the flowers pale purple; appearing from June to September; propagated by cuttings; a native of Chili. Bot. Reg., t. 1812.

A "neat little" plant, with small, oblong linear foliage,

and small, pale purple flowers. It requires protection during winter. A pretty species, but not showy enough to meet general cultivation. (*Bot. Reg. Nov.*)

CCXXXI. *Hydrophylleaceæ.*

EUTOCA.

viscida *Bentham* MS. Clammy Eutoca. A hardy annual; growing two (?) feet high; flowers deep blue; appearing all the fall; propagated by seeds; a native of California. *Bot. Reg.*, t. 1808.

The *E. multiflora*, though not of much beauty, has been grown in our gardens. This species is somewhat handsomer: but the appearance of the plant is "coarse and weedy." Its only recommendation seems to be its value for bouquets; as it is stated that it will "go on growing and flowering in water for two or three weeks after being gathered." The leaves and stems are covered with a viscid surface. Discovered by the late Mr. Douglas. (*Bot. Reg.*, Nov.)

MONOCOTYLEDONOUS PLANTS.

CCXL. *Orchideæ.*

The most beautiful figured in November, are *Vanda tères*; *Maxillaria cristata*, and *Epidendrum fràgrans*.

ART. VI. *Calls at Gardens and Nurseries.*

Hawthorn Grove, Dorchester, M. P. Wilder, Esq.—Feb. 18th—Since our last visit to this interesting place, numerous improvements have been made, most of which our readers are already informed, and among others the new and splendid conservatory or camellia house and stove. The range is upwards of eighty feet long, and is now nearly filled with fine specimens of plants. We need not mention the enthusiasm with which Mr. Wilder enters into the pursuit of gardening, as the many fine things which he has from time to time exhibited, and of which notices will be found in our reports, are sufficient to convince any one, that, as an amateur, he stands among the first in our vicinity. We wish many other gentlemen, who have ample means, would follow his example; they will find the pleasure derived from an interest in gardening, as lasting as that from any other source whatever, and our vicinity would boast of finer gardens than can be found in the Union. When it is recollected that such a collection as Mr. Wilder's did not exist here five years ago, it certainly goes far to encourage others to proceed, as they here see what has been done in so short a time by taste accompanied with zeal and perseverance.

The arrangements of the house have been mostly completed, and the plants nearly all arranged. The lateness of the season when the work was commenced prevented this until the present. Mr. Wilder has also

possessed himself of a gardener: the number of his plants, and the extent to which he has increased the collection, required too much at his hands alone. We therefore anticipate, that, with his additional labor, the plants will be kept in the highest perfection of health and growth.

Entering the first compartment, twenty-eight feet in length, which is devoted to the cultivation of stove plants, and which contains a stage against the back wall, and a pit between the middle and front walk, we were struck with the admirable arrangement of the house and conservatory, which is constructed so that the whole may be seen at one view, upon opening the door. But as we shall, in a future number, by the permission and kindness of Mr. Wilder, give a complete description of the house, and as we now have but little space, we defer any remarks in regard to it. Among the orchideous plants, which are looking in fine health, are several species of *oncidiums* from Rio Janiero. *Eulòphia Mackayana*, that splendid species figured in the *Bot. Register*, is also throwing up new leaves. *Cypripedium insignis*, of which there is a very small plant, is also flourishing. The treatment of all the *Orchideæ* is very peculiar, and few persons understand their management; until lately they have not been very generally cultivated, but as they have now been introduced to our collections, we sincerely hope, that they will be, as they deserve to, the most inviting inhabitants of the stove. We here saw *Ribes speciosum* in flower for the first time: it is a remarkably fine addition to the genus. Although here growing in the stove, it is perfectly hardy, and will be turned into the open ground as soon as it acquires a little more growth. Having been introduced but a few months, and being a small plant, was the reason of its being protected this winter. *Linum trigynum*, pretty with its large yellow flowers, and those fine annuals, *Clarkia elegans* and *Gilia tricolor*, were profusely covered with their charming blossoms. Among the more rare plants, are *Arbutus canariensis*, *Fuchsia arborea*, *Edwardsia microphylla*, *Acacia suaveolens* and *péndula*, and many others. A small plant of *Euphorbia Poinsettii* was covered with showy scarlet bractæes. *Rosa Banksia flore luteo*, Lady Banks yellow rose was full of buds, as was also the white in the conservatory. Two fine plants of *Strelitzia reginæ*, with several buds. There is here, also, a fine plant of the magnificent *Doryanthes excelsa*, which we hope Mr. Wilder will succeed in flowering. A lovely little ixia, *I. grandiflora striata*, had a spathe of buff flowers, with a stripe of pink, expanded. But the most interesting to our eye, of the stove plants, at this time, was the grand display of several species and varieties of *Amaryllis*, of which Mr. Wilder possesses upwards of a hundred species and varieties, two thirds of which are some of the seedlings raised by the celebrated Mr. Colvill. Those we noticed in bloom, were *retinerva*, *recurviflora*, *platypetalon*, *rubro crœcea* and *glaucescens*; *placentifolia*, *comptoniana*, *aúlica*, *tortuosa*, *grandiceps*, *quadricolor*, *Barclayana*, *Durassiana*, *campanulatum*, and some others with fine spikes of buds. By the kindness of Mr. Wilder, we have been furnished with the following list of species and varieties which are, with others, contained in his collection of *Amaryllideæ*. Many of the kinds have been nearly or quite lost to British gardens; and consequently some of them are the only remaining ones of the once gorgeous and superb collection of Mr. Colvill, which, after his death, was scattered throughout England.

calyptrata
vittata
Johnsonii
acuminata
aúlica
psittacina

Solandra flora
equëstris
pulverulenta
reginæ
formosissima
crocata

reticulàta	lilacina
Belladonna	platypétala
supérba	mutábilis
grandiflòra	campanulàta
Limània	quadricolor
platypétalon	purpùrea
striatifòlia	spléndens
robùsta	Harrisòni
flexuflòra	míxta
vallótti	vitalina
Basiflòra	cròcea vitalina
multilèscens	Bowàrri
linbàta	victoriàna
dilùta	quadrolineàta
Beadònia	recurviflòra
Humei	imperialis
radiàta	tortuosa
Colvilli	refulgens
Newburyance	Barclayàna
princeps	speciosa
Archèri	blica
crispiflòra	rubescens
striatiflòra	braziliensis
retinèrva	Hunnemània
rùbro cròcea	carinata
affinis	tricolor
ignescens	Lambèrtia
glaucescens	Fordida
macrantha	Basiflòra
albida striatifolia	tortuliflòra
placentifolia	unipàrvula
Buckleyàna	insignis
concinna	vilifera
comptoniana	congestum
Durassiana	grandiceps
rodolenta	Anne Maria

Of *crinums*, there are five or six species, and also several of *Neréne Habranthus*, &c. They all look in a vigorous state, and once so, they will not be neglected under Mr. Wilder's care.

In the conservatory or camellia house, we found every thing well arranged, and the plants in a vigorous state. The whole collection comprises some hundred plants, of nearly two hundred different names, probably most of them distinct varieties, though not all. The fine double whites, *Lady Admiral Campbell's* double striped and other large specimens were covered with bloom; *conchiflora*, which last year was considerably blotched with white, flowered all red this season; of those new or recently introduced, we noticed in flower *Chandleri*, *corallina*, *eximia* of *Chandler and Booth's Illustrations*, *Elphinstoni*, *concata*, *augusta*, *Charles Auguste*, *spathulata*, *Rossi*, *Dorsètti*, *diversifolia*, single white striped, *punctata*, *Egertonia*, *Halèsia*, &c.; *anemoneflora striata* is nothing but carnation warratah; French white had been in flower, and we observed the faded specimen; it is somewhat similar to *Welbànkii*, and a desirable kind. Of the English *eximia* we cannot speak in justice; on a good sized plant, two blossoms were fully expanded; in shape they resemble the old double white, and in color somewhat *Greville's* red, though of a much livelier tint. Indeed, the gorgeousness of the two flowers was remarkable, it *must* be in the possession of every lover of this charming family. *C. mutabilis* (*Traversi mutabilis plenissima* in

French catalogues,) has a flower bud just opening; it proves to be equal to the description; *reticulata*, *Colvillii*, *rosacea*, *elegans*, *concinna* and others equally fine, show prominent buds which will be expanded by the time our remarks appear in print. Some new and beautiful American seedlings have been added the past fall.

Magnolia conspicua, with three of its strong and highly odoriferous blossoms expanded, was truly charming. Why is not this oftener seen in our green-houses, and indeed in our gardens? It is perfectly hardy in Britain, and we doubt not would be so here, were exertions made to acclimatize it. No collection should be without it; it flowers when quite small: those who have not green-houses, can easily preserve it in any ordinary cellar. We wish we could induce many of our friends to bear in mind the cultivation of this, and *Wistaria Consequana*, the most lovely green-house climber known. What a beautiful display would the large clusters of the latter make, covering the back wall of the green-house, or conservatory.

Two species of *Grevillea*, *Bauërii* and *rosmarinifolia*, were beautiful, with their singular blossoms; *Correa speciosa* full of flowers. Besides the magnolia above noticed are *M. fuscata*, *purpurea* and *pumila*, each of which have flower buds. *Pæonia Moulan Banksii rosea* and *papaveracea* each with buds, and plants of the former in blossom; *rosea* we have never seen: it is much finer than *Banksii*. An azalea, *A. indica punicea*, was in bloom; it somewhat resembles *hybrida*, and is a large flower. Of *Banksia grandis*, there is a fine specimen. The numerous kinds of tea roses here, are not yet in flower, but are full of buds. They are growing well, and will open in a week or two. We feel gratified that Mr. Wilder has preserved all the sorts which he originally had; they are apt to die off unless great pains is taken with them, as their growth is not so robust as the common Chinese. We noted down but half of the fine things which Mr. Wilder pointed out to us, but we have no space for further remarks at this time.

At our Garden. *Rhododendron indicum* var. *Smithii*, *Azalea indica* var. *Smithii* of some authors, and *R. arboreum* var. *alta clerense* will be in bloom in the course of two or three weeks; neither of them, we believe, have ever flowered in the country, and any of our readers who may be desirous of seeing these splendid varieties, will have an opportunity of gratifying their wishes; the former is full of buds, and the latter will expand four or five umbels of flowers. *R. chinensis* will also be in bloom about the same time. *R. ponticum* [*Azalea ponticum*] var. *alba*, *tricolor*, *ne plus ultra*, *hybrida pallida*, and many others of the same species, will also bloom in the course of the spring. This magnificent tribe is easy of cultivation, and numerous new kinds are raised from seed every season by English amateurs and nurserymen. The generic name *Rhododendron* is now adopted for all the species of *Azalea*.

Fine plants in flower in the Green-houses of the Botanic Gardens, Cambridge, Feb. 13, 1834. (Mr. Wm. Carter, Gardener.)

Acacia decurrens, in great exuberance of flowers.

Acacia falcata.

Hæca gibbosa, exceedingly pretty, and in great profusion.

Saxifraga ligularis.

Cyclamen cœum, two varieties.

Scilla anæ'na.

REVIEWS.

ART. I. *The Gardener's Magazine and Register of Rural and Domestic Improvements*. Conducted by J. C. Loudon, F. L.S., H. S., &c. In Monthly Numbers. 8vo., 1s. 6d. each. No. LXVIII, for November.

THE first article is "Notes on Gardens in Inverness-shire," and is principally devoted to an account of several kinds of forest trees, their size, &c.

Art. 2 contains some very judicious "Remarks on the Temper in which Discussions are sometimes carried on." The author alludes to the practice, too general among practical writers, of evading questions at issue, by insinuations and sneers, or by the introduction of irrelevant matter :

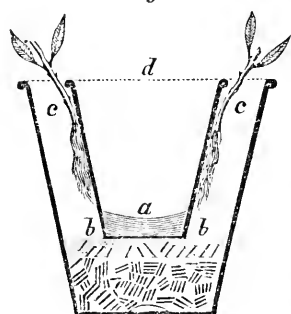
"Seldom, indeed, do we witness that straight-forwardness of character which leads a man to retract his opinions whenever he finds them untenable, or be glad of an opportunity of stating the smallest alteration in his views; but often do we mark the exemplification of a different principle, which leads a man, rather than confess a trifling error, to treat plain questions with evasion, and arguments with insinuations and assertions. To spend one's life in search of the philosopher's stone would scarcely be more futile than the attempts to arrive at truth by discussion with such individuals. It matters little what course you adopt; for either they cannot, or will not, see the drift of your purpose. You may surround them with a fence of reasoning, to get from which honorably, they must either confess their inability, or at once put forth sufficient energy to lay it prostrate; which can only be effected by bringing mind to bear upon mind, and argument to bear upon and confute argument."

The third article is a continuation of a series of designs for laying out suburban gardens, &c.

The fourth article is on a new method of striking cuttings. We consider this of so much importance, that we copy it, accompanied with the engraving.

"The sketch, (fig. 5) represents a new mode of striking cuttings which I have proved to be far superior to the ordinary practice; and which is so extremely simple, that I think it is likely to be adopted, as well by the amateur cottage matron, with her pinks and wallflowers, as by the professed propagator of valuable exotics. It is as follows:—Take a wide-mouthed 48-sized pot, for example, and crock it in the usual manner with broken tiles, &c.; then take a wide-mouthed *small sixty*, and put a piece of clay in the bottom of it to stop the hole; then place it inside the other, on the top of the crocking, so that the brims of both pots may be on a level. Then fill in the space between the pots with sand, or other propagating soil, according to the nature of the plant about to be propagated, and let the cuttings be inserted in the manner here shown (fig. 5), with their lower extremities against the inner pot. Plunge the pot in a cutting frame, or under a bell or hand-glass, in a shady place out of doors, according to the nature of the cuttings and the season of the year; and let the inner pot be filled and kept full of water.

The advantages to be derived from this method are numerous, and must be evident even to the casual observer; the principal of these are



the regularity of the supply of moisture, without any chance of saturation; the power of examining the state of the cuttings at any time, without injuring them, by lifting out the inner pot; the superior drainage, so essential in propagating, by having such a thin layer of soil; the roots being placed so near the sides of both pots; and the facility with which the plants, when rooted, can be parted for potting off, by taking out the inner pot, and with a common table-knife, or the like, cutting out every plant with its ball, without the awkward, but often necessary, process of turning the pot upside down to get out the cuttings.

In fig. 5, *a* shows the clay stopping of the pot; *b* the drainage of potsherds, or broken crocks; *c* the sand or other soil in which the cuttings are inserted; and *d*, the water in the inner pot."

Art. 5, entitled "Notices of remarkable trees growing near London," contains nothing of interest to our readers.

The sixth article is a "list of trees, with their prices, in the London nurseries, for planting an arboretum, on a comprehensive scale, with the smallest number of plants, &c. By the Conductor. In the introductory remarks, he states :

"So many of the names in the nurserymen's catalogues stand as those of species, while, in fact, they are only those of varieties, or are synonymous, that we think we shall be rendering a service to those who intend planting arboreta this season, by giving a list of trees, which, according to our opinion, will comprehend almost all the species procurable in the London Nurseries, and also some of the best and most distinct varieties.

"It must not be supposed, while we contend for limiting the species, that we deny the distinctness of many of the varieties: as well might we pretend to say that all the garden varieties of the apple and pear were exactly the same thing as the crab, and should be neglected accordingly. All that we wish is, that varieties should not be passed off as species; partly to simplify the business of planting arboreta, and partly to prevent gardeners and others from puzzling themselves to find specific distinctions, when in reality, none exist. It is this rage for making species, and parade of nice technical distinctions, which, with many, has turned practical botany into ridicule. According to our ideas of a species, there is none which may not be distinguished, as such, in the seed before it is sown, and in the infancy and maturity of the plant, and at every season of the year. We are aware that this will not be agreed to by many acute botanists; but we shall hereafter, in the *Arboretum Britannicum*, explain ourselves at length, and trust to the common sense of our readers."

The list is too long for insertion here, it containing about 300 plants. It includes eight species of *Magnolia*, fifteen of maple (*Acer*), thirty-eight of *Crataegus*, and about twelve of oak (*Quercus*), and many evergreen trees and shrubs. The cost of such, in England, of small size plants is about £30 sterling; but they would cost here double or treble that sum.

ART. II. *Report of the Committee of Arrangements of the Second Annual Exhibition of the Columbian Horticultural Society, June 10th and 11th, 1835, with the Reports of the Standing Committees, upon the Objects exhibited, and those entitled to Premium.* Pamphlet, 8vo. pp. 28, Washington City, 1835.

THIS pamphlet, which we have been kindly favored with, is filled with a variety of interesting matter, relative to the objects which were presented at the annual exhibition in June, 1835. The reports of the committees on fruits, flowers and vegetables, are annexed, and the amount given in premiums exceeds two hundred dollars. We are extremely happy to perceive that the ladies of Washington take such a prominent part in the exhibition. No less than twenty-five contributions of various kinds of flowers were made, and upwards of twelve prizes carried off by them. If the ladies of other cities, towns and villages, were to manifest the same zeal, in this most innocent pursuit, we should soon have the gratification of beholding societies springing up in every part of the country, and the influence they would exert in creating a taste for gardening, would be most wonderful. We are much pleased to notice the attention which is given to culinary vegetables; too little has been done by our horticultural societies to improve this most useful and important branch of gardening, too important to suffer the neglect which it has hitherto received. We hope it will command more attention in future.

Annexed is a list of the officers and members of the society.

MISCELLANEOUS INTELLIGENCE.

ART. I. *General Notices.*

Insect Plant.—The following account of a most singular and extraordinary phenomena in Natural History, we extract from a Southern paper: for the truth of the same we cannot vouch; but it comes to us in such a manner, that we cannot hardly doubt its correctness. A figure of the insect plant appeared in the January number of the American Magazine, copied, it was said, from a preserved specimen. It must be a most singular curiosity.—“A specimen of a natural production was shown us a few evenings since, that is neither fish nor flesh, beast nor bird, animal, vegetable nor mineral! It was procured in Plymouth, North Carolina, and brought to this city in a glass of alcohol. The thing, for it is without a name, is both entomological and vegetable. When its entomological nature commences, and when its vegetable character has arrived at maturity, its entomological character develops itself and its vegetable ex-

istence disappears. In other words it is alternately a bird and insect: it is perhaps about one inch in length and three-fourths of an inch in circumference. It is of a brownish color, shaped like a wasp, destitute of wings, head similar to a beetle, with two antennæ or horns, has neither its head on either side, a short leg shaped like those of the mole, with broad, serrated extremities, and intended, doubtless, like those of the earth. It has also two posterior legs, the purpose of which shall be seen. When the insect has attained its growth, it disappears beneath the surface of the ground and dies. Immediately after its death the two posterior legs, just spoken of, begin to sprout or vegetate. These two shoots soon appear above the earth, and the insect plant soon attains the height of about six inches. It puts forth branches and leaves resembling trefoil. The extremities of the branches bear a bud, which contains, in embryo, neither leaves nor flowers, but an insect! As the insect develops itself and grows, it neither falls to the ground, or returns on its mother plant, but feeding on its leaves until the plant is exhausted, when the insect returns to earth again, and again the plant shoots forth!

The true nature of this insect plant or vegetable insect, we know not what to call it, is entirely inexplicable to us. It may be surmised that an insect has here associated itself with the seed of a plant, in such a manner that they produce and mature each other. Or, it may be supposed, that nature has invested this specimen of existence with attributes the nearest possibly assimilated to those of both the vegetable and animal kingdoms, yet belonging not exactly to either, but entirely to both. It may seem to be the hinging point at which the animal kingdom merges into the vegetable, and the vegetable into the animal kingdom. It is certainly a wonderful curiosity, and we believe that it is not entirely unknown to naturalists, but has never before been publicly described.

We understand that a gentleman in Philadelphia of whom the specimen we saw was procured, is cultivating a quantity of them which he has obtained from North Carolina, for the purpose of furnishing the Museums. We hope to be able to furnish a more particular account of this insect vegetable hereafter. In the specimen we saw, the plant had grown about three inches, and the insect was yet preserved in its original and nearly perfect state.—*Tam. Mag.*

ART. II. *Foreign Notices.*

Dahlia Exhibitions.—These exhibitions were held in various parts of England last fall, and the beauty and splendor of the flowers were superior to any ever before seen. We extract the following account of the Cambridge Florist's Society.

"This Society had their grand autumnal show of dahlias on Thursday, Sept. 24th, in the Assembly room at the Hoop Hotel. We have witnessed many floral exhibitions here and at other places, but we never before beheld any thing approaching the beauty and magnificence of this exhibition; on no previous occasion was the dahlia exhibited in so high a state of excellence. We may expect to see great additions made to the colors and varieties of this very beautiful flower, but we much doubt if ever the grand stand of prize flowers displayed on this occasion will be surpassed in size or quality by that of any future show. The task of decorating the room was entrusted to Mr. Edward Catling, florist, of

Cambridge; and nothing could possibly exceed the happy and elegant taste with which every ornament was executed. The sides and ends of the room were beautifully decorated with evergreens, wreaths and dahlias. At the head of the grand stand was an immense orange tree, thickly studded with dahlias, to represent the *fruit* in its various stages of growth, backed by a beautiful *Fuchsia multiflora*, 12 feet high, from the Botanic Garden. At the end of the room was a prettily variegated crown entirely composed of dahlias. But the grand attraction of all was a splendid balloon, wholly formed of dahlia blooms, suspended from the ceiling, the car of which appeared to be illuminated, from being placed over a gas chandelier. This ærial machine had a striking effect, the flowers being arranged in stripes to represent variegated silk; and we were told that more than 2,300 dahlias were required to complete the balloon, exclusive of the car, from which two flags were pendent.—The afternoon show was attended by a numerous and respectable company; but the evening exhibition was crowded beyond all former precedent, owing to its being on the eve of the horse-fair, which gave the neighboring country people an opportunity of witnessing the finest display of dahlias ever seen in Cambridge. Upwards of 700 well-dressed persons were in the room at one time, and from eight to half past nine o'clock, the number amounted to little, if any, short of 3000 persons, all with happy countenances, highly delighted with the fairy scene; added to which were the musical strains of the Cambridge Military Band, who played several new and difficult pieces, with a precision and taste that would have done credit to veteran performers. After the ladies had withdrawn, more than 200 members and their friends sat down, with the splendid flowers before them, and enjoyed the scene with music, song and toast.

We have prepared some account of the best dahlias which gained prizes, which will appear in our next.—*Conds.*

ART. III. Domestic Notices.

Maclura aurantiaca.—We have received from some of our correspondents more information respecting this plant. From this we are convinced that it is a diœcious plant, and that Mr. Nuttall was right in placing it in Diœcia tetrândria. One of our correspondents writes as follows:—"The *Maclura* is, unquestionably, a diœcious plant. I have both the male and female growing on my grounds, which have flowered freely for several years. It belongs, as stated by Mr. Nuttall, to the order tetrândria, but I am unable to describe, from memory, the staminate flowers accurately at this time, further than to say they are very small and white, and depend in loose racemes from the axils of the leaves. The pistillate plant is a year or two older, and considerably larger than the staminate; and, according to my observation, I should say the latter was not necessary to the former, for the production of fruit or berries; but that it is indispensable to the fertilization of the seed. The berry is composed of several hundred acini or pulpy grains, each of which should contain one seed. Owing, however, to the disparity in size and age, between the two trees, and the consequent partial fructification of the pistillate organs by the pollen of the staminate flowers, I have not noticed one of the berries to contain more than fifty seeds; and until two or three years past, they perfected none." The *Maclura* will undoubtedly

stand the rigors of our winters unprotected, as during the last winter not a single twig was injured on plants which were standing in a situation where the mercury fell as low as 12° below zero. Although this was but for a short time, yet, as not even a branch was in the least hurt by the cold, we infer that if it was exposed to the same temperature a greater length of time, it would receive but little additional injury: perhaps a partial damage of the young and unripened wood, made late in autumn. Plants, a few years since, were for sale in Paris, grafted on the white mulberry. How would the *Morus multicaulis* grow, inoculated upon the *Maclura*? Would it not be well for some of our nurserymen to try the experiment? Plants of the Chinese mulberry are now for sale in our nurseries, grafted upon the white mulberry.—*Conds.*

Green-houses and Forcing-houses.—We understand N. Biddle, Esq. intends erecting, the coming season, a fine range of houses, in New Jersey, four or five hundred feet in length: we are happy to perceive this increasing taste for gardening.—*Conds.*

ART. IV. *Retrospective Criticism.*

Rural Affairs.—With me, your Magazine is a particular favorite. I read it constantly and with great delight, and think it a valuable work; and what augurs well for its future prosperity, is the fact, that it improves with every number. I have access also, to several foreign periodicals of a similar character, which I read with much interest, and from which I have gathered considerable information. As the "American Gardener's Magazine" purports to be a register of useful discoveries and improvements in Horticulture and "*Rural Affairs*," I have thought an increasing interest might be given to it by touching occasionally on a subject on which you have hitherto said nothing, and which our transatlantic friends are exerting themselves to create a correct taste for, viz., "*Rural Architecture*." By occasionally giving plans and elevations of cottages, and such houses, (so designed as to produce the most happy and picturesque effect,) as will suit the circumstances and convenience of that class of people for whose benefit you are so commendably exerting yourselves, you will, no doubt, confer an especial favor. I hardly need say that these are such as occupy the middle walks of life; for the indigent have not the means to gratify their tastes, and the wealthy have at their command the talents of those whose profession it is to design and plan buildings of every description. As our country increases in wealth and prosperity, so will a growing taste for rural pursuits manifest itself in our population. Every year we see individuals, who by industry and thrift, have acquired a moderate competency, retiring to the pleasures of a country life, rather than striving in the turmoil of business to obtain an overgrown fortune. And I imagine there are more of this class than any other on your list of subscribers. I don't doubt that yourselves, as well as many of your correspondents, have the ability, and also a willingness to communicate the desired information. Three or four such plans, in the course of a year, (or volume,) together with designs for ornamental front fences and entrance gates, and also descriptions of the best and most durable methods of preparing garden walks would add much to the value of your already highly esteemed Magazine. Should these remarks be deemed worthy of your notice, they may possibly draw from the resources of some one whose eye they meet, and thereby confer a very acceptable favor on more than, *Your Ob't Serv't, Camellia.*—January 25th, 1836.

Most cordially do we agree with the suggestions of our much respected correspondent; nothing but a more liberal patronage is wanting to enable us to do all that is desired in the above remarks; let but this be given, and we can assure our correspondent and all the readers of our Magazine, that our exertions in creating a taste for Rural Architecture and improvement shall be commensurate with the increased aid of our friends. We have already begun a series of engravings representing some of the handsomest and most convenient green-houses in our vicinity, and shall continue them throughout the year, so that our readers who wish to build such structures, will here find models from the small and elegant one already described, to some of the most commodious and lofty with which many of the fine residences in the vicinity are embellished. We also contemplate a series of designs for gardens, beginning with those of small size, of a quarter of an acre, to those, including lawns and pleasure grounds, of several in extent. The next thing which it would be our desire to improve, is the architecture of cottages and farm buildings generally. But to do this, we must receive a more liberal support: let our correspondent, and indeed, every subscriber, procure us an additional one, and we can then, with pleasure, promise the fulfilment of all our plans.—*Conds.*

ART. V. *Massachusetts Horticultural Society.*

Saturday, January 30th.—Exhibited. From S. Sweetser, flowers of the following varieties of camellias:—*álba pléna*, *incarnáta*, *Welbánkii*, *pæonæflóra ròsea*, *Pompònia*, *ròsea*, *Decandóllii*, *Halèsia*, *Chandlèri*, *althææflóra*, *rubricáulis*, *Henrietta* (helle.) From M. P. Wilder, camellias of different kinds: *corállina*, *insígnis*, *spathuláta*, *cólla*, *punctáta*, *conchiflóra*, *myrtifolia*, *álba pléna*, *Wárdii*, *exímia* [English;] the two latter were exhibited now for the first time here; also, *Pæónia Móutan var. Bánksii* and *papaverácea*. *Fruits*: From George Newhall, Dorchester, Brussels pippin, Kaighn's Spitzemberg, and two other sorts of apples, names unknown. From Lemuel Crehore, Newton Lower Falls, a Russett apple, name unknown. From L. Thaxter, Edgartown, Pignose apples.

Pieces of plate were awarded to the following gentlemen for their exertions in the advancement of gardening, and for the exhibitions of fruit and flowers at the Society's room, by them: Robert Manning, Wm. Kenrick, M. P. Wilder, Samuel Walker and the Messrs. Winship.

February 6th.—Exhibited. From S. Sweetser, *Dáphne odóra*, *Vibúrnum tinus*, *Verbèna chamædrifolia*, *Meliánthus mājor*, *Acácia lophántha*, *Calámpelis scábra*, *Caméllia maliflóra*, heaths, tea roses, &c.

From Messrs. Hovey, specimens of *Isabella* grapes, in a good state of preservation.

February 13th.—Exhibited. *Fruits*: From E. M. Richards, *Pomme d'Api* (or Lady Apple,) Gardener's Sweeting, Shop Apple, Cogswell, Wine-sap, Barn, American, Wine, Wells's pippin, Detroit, Nonsuch, Spice, a wild apple, and some others, names unknown; L'Echasserie, [of Boston and vicinity collections, but supposed the *Ambrette*,] and Winter Orange or Orange d'Hiver pears. From R. Manning, Danvers Winter Sweet apples. From S. Downer, Bezi Vaet pears, Kaighn's Spitzemberg, and *Æsopus Spitzenberg* apples. From I. P. Davis, Tollman's Winter Sweet apples. From John Mackay, Boston, Mackay's Winter Sweet. From John Clapp, Reading, Nonsuch, Danvers Winter Sweet, a kind named the early Baldwin, but supposed Kaighn's Spitzemberg. From E. Weston, Jr., Apples, the name unknown.

ART. VI. Quincy Market.

<i>Roots, Tubers, &c.</i>		From	To			From	To
		\$ cts.	\$ cts.			\$ cts.	\$ cts.
Potatoes:				Common crookneck, per cwt.		4 00	5 00
Common, { per barrel, . . .	1 25	1 50		Lima, per cwt.,	4 00		
{ per bushel, . . .	37	50		Paleino Squash, per pound. . .	6	25	
Chenangoes, { per barrel, . . .	1 50	1 75		Pumpkins, each,	12		
{ per bushel, . . .	50	62					
Eastport, { per barrel, . . .	1 50	2 00		<i>Pot and Sweet Herbs.</i>			
{ per bushel, . . .	1 00			Parsley, per half peck,	75	1 00	
St. Helena, { per barrel, . . .	1 50	1 75		Sage, per pound,	17	20	
{ per bushel, . . .	62	75		Majoram, per bunch,	6	12	
Turnips:				Savory,	6	12	
Common, { per barrel, . . .	50	75		Spear-mint,	6		
{ per bushel, . . .	25	37					
Yellow French, per barrel, . .	1 00	1 25		<i>Fruits.</i>			
Onions:				Apples, dessert:			
Common, { per barrel, . . .	2 00	2 25		Common, { per barrel, . . .	1 50	1 75	
{ per bushel, . . .	62	87		{ per bushel, . . .	62	75	
{ per bunch, . . .	4	6		Baldwin, { per barrel, . . .	1 75	2 25	
White, per bunch,	6			{ per bushel, . . .	1 00	1 12	
Beets, per bushel,	50	75		Russets, { per barrel, . . .	1 75	2 25	
Carrots, per bushel,	50	75		{ per bushel, . . .	87	1 00	
Parsnips, per bushel,	75			Pears:			
Falsify, per bunch,	12			St. Germain, per dozen, . . .	none.		
Horseradish, per pound, . . .	10	12		Winter, { per barrel, . . .	4 00	5 00	
Shallots, per pound,	20			{ per bushel, . . .	2 00		
Garlic, per pound,	14			Quinces, per bushel,	none.		
<i>Cabbages, Salads, &c.</i>				Pine Apples,	25	50	
Cabbages: per dozen.				Grapes:			
Savoy,	75	1 00		Malaga, per pound,	37	50	
Drumhead,	75	1 00		Cranberries, per barrel,	8 00	9 00	
Red,	75	1 00		{ per bushel,	3 00	3 50	
Brocoli, each,	37	75		Oranges, { per box,	2 50	3 00	
Cauliflower, each,	37	75		{ per dozen,	25	37	
Celery, per root,	10	25		Lemons, { per box,	2 00	2 50	
Lettuce, per head,	6	12		{ per hundred,	1 00	1 25	
Radishes, per bunch,	10	12		Chestnuts, { per barrel,	6 50	7 00	
Spinach, per peck,	17	50		{ per bushel,	2 00	2 50	
<i>Squashes and Pumpkins.</i>				Walnuts, { per barrel,	4 00	4 50	
Canada crookneck, per cwt, . .	5 00	6 00		{ per bushel,	1 75	2 00	
				Almonds, per pound,	12	14	
				Filberts, per pound,	4	6	

REMARKS. In our last, we remarked that the state of the market was dull : it has continued so up to the present time, few sales to any amount having been made, as is generally the case at this season. Probably one great cause is the severity of the weather, which has prevented shipments to the south and west ; another, though less, is, that the intenseness of the winter has prevented as much travelling as is usual at this season, and the demand of the city and vicinity is consequently very small. The latter cause, though seemingly trifling, exerts quite an influence in the market, especially of the nicer productions for the tables of the first houses. This is easily perceived as soon as spring commences, and the increasing demand is fully equal, oftentimes, to the supply.

Potatoes remain about the same : few, or none at all, have arrived from the eastward ; but, as few sales have been made, the stock on hand is fully adequate to the demand. We stated in our last, that we should notice some new kinds, which have lately been introduced, with remarks respecting their comparative value. These are the Early Nonpareil, Taylor's forty-fold, and the St. Helenas. The latter has been extensively cultivated the past season, both at the eastward and in this vicinity ; and, from the excellency of those which were raised at the former place, it was anticipated that they would prove a valuable and profitable kind for our marketmen ; this idea, however, we are in fear, will not prove true ; as those which were produced on some of the best potato land in

the vicinity, are far inferior to those brought from the eastward; they are, however, a great yielder, and may still prove a more profitable kind than the common ones generally grown. The Early Nonpareil is a very early potatoe, and deserves general cultivation for an early crop; its qualities are also good. Taylor's forty-fold are very superior; they are a very early potatoe, and their quality superior to any that has come under our observation; they yield a great crop, though their size is not very large; this kind, also, merits universal growth by the marketer. The Perkins potato, which has been known about here for four or five years, though a good sort, will not compare with this. We make these remarks, as we are desirous to see them more extensively cultivated; this we cannot expect to do, unless their qualities first become known. Many of our market gardeners are too prejudiced to adopt new sorts of vegetables for old ones, and thus continue to cultivate kinds, though possessing but little merit, which will not near so amply repay them for their labor. We know that, in some instances, they may have been deceived; but this should not make them give up all further trial.

Turnips are yet plentiful, and prices lower. Onions remain the same, no shipments having been effected. Of cabbages, the stock is tolerably large, the warm weather of the present week having enabled those who had large quantities, to bring them in. Squashes are exceedingly scarce, and the prices demanded are higher than we recollect to have known them for some years. The stock of apples is very abundant, and prices the same as in our last. We noticed a few of the Lady apples; they are much liked, and sell readily at prices higher than our quotations: we would recommend this kind, as deserving cultivation for its beauty, besides its good qualities, both of which make it a desirable market fruit. Of cranberries, the stock is getting short. Walnuts are lower.

Yours, M. T.

ART. VII. *Obituary Notice.*

DIED, in Philadelphia, on the morning of the 18th of January, *George Vaux, Esq.*, the worthy and highly esteemed President of the Pennsylvania Horticultural Society. He was much interested in horticulture and botany, and his loss is much regretted by the Society, who will long feel the want of his punctual and efficient services.—*Yours, A. B.—Philadelphia.*

ART. VIII. *Meteorological Notices.*

FOR JANUARY.

The weather during the month of January was very variable. Large quantities of snow fell and remained on the ground throughout the month. The winds prevailed to the north-west, and towards the latter part the cold was very severe. The storms were, however, accompanied with but little wind, and the snow consequently fell very even.

THERMOMETER.—Mean temperature, 22° $40'$. Highest, 40° —Lowest, 10° below zero.

WINDS.—N., five days—N. E., two—S., two—S. W., five—W., five—N. W., twelve days.

Force of the Wind.—Brisk, ten days—light, twenty-one days.

Character of the Weather.—FINE, six days—FAIR, ten days—CLOUDY, fifteen days.

Rainy, two days—Snowy, eight days.

Depth of the Snow (in inches), 20.66.

MONTHLY CALENDAR
OF
HORTICULTURE AND FLORICULTURE,
FOR MARCH.

FRUIT DEPARTMENT.

Grape vines will this month be bursting their eyes, when the vines should all be tied up straight to the wire or wood trellis, with shreds of bass mats. If the shoots were bent down as directed last month, they will have broken equally from the bottom to the top. Keep an equal temperature in the house. For further directions see Vol. I, pp. 79, 119, 159, &c.

Strawberry plants may still be taken in the green-house for a succession. (See Vol. I, p. 253, and the last number, p. 47.)

Grape Eyes or Cuttings for general success should be put in this month.

Peach trees. Where there are several pots of peach trees in collections of fruits, as there always should, they should be put into the green-house this month to forward them.

Grape vines in pots should be placed in the green-house to forward them, if desired. (See Vol. I, p. 41.)

Grape vines, in the open air where not pruned in the fall, should be the latter part of the month.

Strawberry beds should be uncovered the latter part of the month, if the weather is mild. (See Vol. I, p. 299 and page 50 of the present number.)

Gooseberry and Currant bushes should be pruned the latter part of the month.

Scions for grafting, should be cut the present month.

FLOWER DEPARTMENT.

Camellias, still require much water, as they will begin to make their spring growth this month. Inarching should be performed, if it is wished to increase any variety.

Geraniums will now be advancing their flower buds. Give them a situation where they will receive the benefit of all the air that is admitted.

Calceolarias will again require repotting. Seeds should also be sown at this time.

Schizanthuses will again require new potting. Be careful in giving water.

Auricula and Polyanthus seed should be sown, if neglected last month.

Hydrangeas may be propagated this month. Select last year's wood, which has bold and prominent buds, and the plants will bloom freely the coming summer. Plant only one cutting in a pot.

Hyacinth and Tulip beds should be uncovered the latter part of the month, if mild.

Ranunculuses should be planted this month, where not done in the fall. Those beds that were planted in the fall, should be uncovered the latter part of the month.

Roses should be pruned this month.

Dahlias should be propagated this month, if a quantity are wanted to decorate the garden.

THE
AMERICAN
GARDENER'S MAGAZINE.

APRIL, 1836.

ORIGINAL COMMUNICATIONS.

ART. I. *On the Construction of Brick Pits for early Forcing ; to which is added the Cultivation and Forcing of the Cucumber ; taken from Horticultural Memoranda, and exhibiting the State of their Progress from January until September.* By the CONDUCTORS.

(Continued from page 81.)

JOURNAL.

April 2d, 1832.—The weather to-day very fine and mild ; the mercury indicating 54° at one o'clock, P. M. The plants are now growing vigorously, and show large numbers of flowers.

At the close of this article, in our last, we alluded to a practice general among gardeners, commonly termed "setting the fruit ;" but what is perhaps more proper, or, at least, better understood, by this, is the impregnation of the pistillate flowers, or those with embryo fruit, with the staminate flowers, or those erroneously called false blossoms. Formerly it was a practice with many persons, to pull off or destroy all the *false* blossoms, from the supposition that they injured the plants, by exhausting their strength. This, however, is a bad practice ; and if pursued in early forcing, the cultivator would be deprived of a large quantity of fruit, and such as was produced, would be of inferior appearance. Sometimes a large quantity of staminate blossoms will appear, and no pistillate ones ; when this is the case, they should be partly rubbed off, as they are then of no use, and rather tend to keep the plants from pushing out fruitful runners. Cobbett states, in his *Gardener*, that the fertilizing of the pistillate blossoms is entirely useless, and only pursued from its being an old practice among English gardeners. We were inclined to this opinion, until we had tried the experiment to our satisfaction ; but we are now well assured that,

if the blossoms are not impregnated during the months of March and April, very little fruit will be obtained from the vines. In the spring of 1831, we had three hills of plants, one of which was in a much more forward state than the others; the plants having been obtained, when young, from a friend who had raised them before our bed was put into operation. They grew vigorously, and came into flower some time before those which we sowed ourselves; the blossoms were all pistillate ones, each showing embryo fruit. They continued to appear for above a fortnight, without opening a staminate flower; not one of the fruit swelled off, and we gave up the hope of seeing any, for some time, when it occurred to us, that if we could procure from some person, who had plants in flower, a few blossoms to impregnate them, there would be no difficulty of their growing; this was done, and in less than twenty-four hours afterwards, the fruit had swelled to double its embryo size. A few days after this, the staminate blossoms opened on the other plants; but still the fruit would not swell, unless the blossoms were regularly impregnated. In the summer time, when they are grown in the open air, there is no need of the operation; as bees and the free circulation of air accomplish the object; but in a frame, where the sashes are opened only a few inches, during March and April, or earlier in the season, there is not a free circulation of air sufficient to fertilize the blossoms, and recourse must be had to other means. We have tried the experiment two or three seasons in succession, and are convinced of the truth of these observations. The operation is performed as follows:—When the flowers are in full bloom, (which is generally about 9 o'clock in the morning,) cut off one of the staminate ones, and cut or tear off all the petals, being very careful, in doing this, not to destroy the farina; then, holding the pistillate blossom in the left hand, so as not to injure the young fruit, apply the staminate one, and giving it a twirl once or twice, let it remain in the flower; it is important that this should be done in the morning, as, in the afternoon, the flowers close up, and there is some danger that the operation will have no effect. Such flowers, with young fruit, as look weak and puny, should be cut off, and not be suffered to grow; as they take away the strength from the others. Only one fruit should be allowed to grow at a joint, and when it is shaded too much by the leaves, they should be cut away, that it may acquire a good deep color; it may also be laid upon a piece of slate or glass.

During this month, the bed should be uncovered earlier than the last. Begin by uncovering it at 8 o'clock in the morning, and gradually earlier, so that, at the last part of the month, the covering may be taken off at 7 o'clock. At night, it should be covered up at 6 o'clock, and gradually later toward the end of the month, when it may be done at 7 o'clock. On no account omit a *single* night, as a sudden change in the weather, (which often happens

in April,) would greatly injure the future health of the plants. Temperature of the bed, 65°, 76°, 72°; of the soil, 78°.

6th. The heat of the bed having decreased, from the last three or four days of cooler weather, two barrows of the old manure were removed, and four of fresh added. The whole was well forked up, and the doors closely shut. This should never be neglected; immediately after the manure is thrown in, at any time, they should be closed, and straw or hay placed in front of them and against the crevices all round; this should be kept up, as before mentioned, by a wide board or plank. When the straw or hay, from continued wet, becomes rotten, it should be replaced by a fresh lot. Some of the blossoms with embryo fruit, which had been fertilized, from too much moisture in the bed, damped off; but those which have been since attended too, now swell their fruit rapidly. The plants have now acquired considerable size, and extend themselves very fast: all the joints are regularly pegged down as before recommended. Continue to stop the runners at every joint, as this will cause the vines to throw out more fruit, and acquire greater vigor. Temperature, 62°, 75°, 78°; of the soil, 78°.

10th. The roots of the plants having penetrated through the soil in the hills, a sufficient quantity was now added to make the whole in the bed level; for this purpose, it should be composed of loam, old decayed manure, and leaf mould, in about equal quantities. Let only a portion of it be put in at a time, early in the afternoon, if the weather is cool, and there is any danger of chilling the temperature of the bed; but in mild weather, there need be no apprehension of injury, and the whole may be put in at once; be careful, in doing this, not to break the leaves of the plants, and thus cause them to bleed. They will now require water every day, which should be given as soon as the sun's rays leave the sashes; it should be warmed to the temperature of the air in the bed, and be given over the plants through a very fine rose, lightly sprinkling the whole of the surface of the soil, so as to raise a gentle steam. Air should be admitted in greater quantity as the spring advances, and during warm days, the sashes should be opened at the front as well as the back, so as to allow of a draft of air through the bed. Numerous blossoms expand every day, and due attention must be given, and every pistillate one fertilized, or the fruit will not swell kindly. Let it be a rule to go over the vines every morning about 8 or 9 o'clock. Temperature, 70°, 80°, 68°; of the soil, 85°.

14th. The first two fruits which appeared, having grown to their full size, they were cut to-day. Their average length was eight inches; those which appear first do not generally acquire the size of the later ones. The heat in the bed has also decreased, and thus prevented their full growth; the temperature should never be allowed to fall but a degree or two after the fruit appears, or

it is apt to grow crooked and inferior flavored. Three barrows of manure were taken out, and four of fresh added to-day; this was well forked up with the old manure, and stowed up at the back of the pit. Temperature, 72°, 75°, 66°; of the soil, 80°.

19th. The heat having declined, two barrows of fresh manure were added to-day. The plants now grow vigorously, and numerous blossoms expand every day; a number of fruit will be ready to cut in a week or ten days. Give large quantities of air every favorable opportunity, and do not omit to supply the plants with plenty of water, as they delight in this element, and soon show when it is not duly given. Cut away all decayed leaves, and preserve the air in the bed as pure as possible; cucumber plants are often injured by an impure atmosphere. Temperature, 68°, 68°, 66°; of the soil, 76°.

26th. Cut four more cucumbers to-day. The temperature of the bed has become quite brisk, and the fruit swells very rapidly. The bed is looked over every morning. Temperature, 70°, 95°, 75°; of the soil, 82°.

28th. Cut two fruits, measuring ten inches in length. The plants continue to acquire more vigor.

30th. Cut eight cucumbers, some of them measuring eleven inches in length. Large quantities of water are given every night, and as much air admitted as will keep the thermometer below 100° in the middle of the day.

May 1st.—The season has now become so far advanced, that but little care will be required in the cultivation of the plants, compared with that of the two previous months. Indeed, through this and the succeeding months, they need no more attention than is given to many other kinds of vegetables, when it is intended to grow them to perfection. The covering must be continued until the latter part of the month; as the sudden changes in our climate, and the cold easterly winds which are sometimes prevalent in this month, keep the heat in a fluctuating state; the benefit of this practice will be quickly perceived in the health and vigor of the plants, and the kind and rapid swelling of the fruit, which will now be produced in the greatest abundance. Sudden checks in the temperature of the bed are more injurious to the successful cultivation of the plants, than most all other causes together; and when they are in full bearing, they are most especially to be guarded against; this should ever be in the mind of the gardener, who would wish to be called a good grower of forced vegetables or fruits.

Water and air must be given in greater quantities, and, if convenient, liquid manure, in a rather weak state, may be supplied once or twice a week; this is not of so much consequence now, as later in the season, when the strength of the soil is more exhausted; but it may be occasionally applied: give air early in the morning,

or as soon as the sun's rays fall upon the sashes ; and in very warm days, which frequently happen, toward the latter part of the month, draw them half off, so as to admit of a good current of air through the bed. Shut up seasonably in the afternoon, as soon as the plants have been refreshed with water, and cover the sashes at sunset. Do not neglect to look over the vines every morning, and impregnate every pistillate flower ; for although the bees, at this season, sometimes enter the bed, and a current of air passes through it almost every day, yet where the leaves are crowded, neither reach them to have any good effect.

Four barrows of fresh manure were added to-day. Temperature, 68°, 78°, 66°. The cool weather of the last few days has caused a decline in the heat.

5th. Added two barrows of fresh manure. The heat has become brisk, and the fruit swells very fast ; five cucumbers were cut on the 2d, and two yesterday, some of them measuring twelve inches in length. Temperature, 72°, 76°, 75° ; of the soil, 82°.

12th. Since the last date, twenty-eight fruits have been cut from the plants ; the heat of the bed has been most remarkably retained. Air is admitted sufficiently to keep the thermometer at 95° in the middle of the day. Temperature, 75°, 90°, 80°.

18th. Heat declined some the past week, and three barrows of fresh dung were added to the bed. The plants will now extend themselves exceedingly fast, and care must be taken to stop them at every joint, and make them throw out fruit ; trim out the runners where they cross one another too thickly, and peg them down in handsome order, as before directed ; cut away all broken and yellow leaves, and keep the air as free from impurity as possible. Lay the joints by drawing up the soil each side, after the pegs are put in ; be careful not to cover them, as they are liable to damp off, if dull weather ensues. Temperature, 78°, 89°, 80°.

24th. Fourteen cucumbers, of fine size, have been cut the last six days. The heat having declined, two barrows of manure were taken out, and five of fresh put in. That in the pit was well forked up before the new was added. Temperature, 75°, 75°, 75°.

29th. The heat uncommonly brisk ; five fruits cut yesterday. Temperature, 80°, 89°, 80°.

June 3d.—Removed two barrows of manure, and added four to the pit. The covering to the sashes may be mostly left off, unless in cold rainy nights. The sashes may, also, in the latter part of the month, be allowed to remain open an inch or two during the night. Give water freely, and occasionally manure water. Temperature, 75°, 89°, 80°.

12th. Heat brisk. Temperature, 82°, 96°, 81° ; of the soil, 88°. Twenty-one fruits have been cut since the third of the month, and all of fine size. We have so far enumerated the quantity of fruit cut ; but we think there is no necessity for a repetition

of this; from eighteen to twenty-four were gathered *every week*, until the latter part of August, when the vines were allowed to run at random. A large number, of small size, were cut for pickling afterwards, besides many for the table. The average length of the fruit, throughout the season, was a fraction over ten inches.

19th. Renewed two barrows of manure, and added one of fresh to the pit; the plants continue to spread rapidly, although numerous large runners are cut out every day or two; were it not for such prunings, all would be confusion. The knife should be handled carefully in performing the operation, and the leaves bruised or broken as little as possible. Temperature, 80°, 88°, 82°.

28th. Four barrows of fresh manure were added to-day. The whole was well forked together. Temperature, 79°, 90°, 78°. This was the last manure that was added to the bed. The vines continued to grow vigorously and bear plentifully. Liquid manure may be applied, if they do not appear flourishing, though we seldom had occasion to use but a small quantity; let the sashes remain partly open, or take them wholly off in gentle showers, that the plants may receive the benefit of the rain. During August, they may be left off altogether. Keep the plants tolerably thin of vines, so that the air may circulate freely; and cut away all leaves where crowded together so as to shade the fruit.

With this routine of culture, the vines may be kept in bearing until October; but after the fruit was to be had in plants from the open air, they were generally neglected, and but little attention given to them. In very small gardens, where there is not room to raise plants in the open air, by pursuing the system of pruning, watering, &c., they may be kept in a fruitful state.

After the vines have done bearing, pull them up, and if the bed is not wanted for any particular use, the soil may remain until November, when the old manure should be thrown out. The same operation should be performed, to put the bed into a fit state to commence forcing again, as mentioned in a former paper (Vol. I, p. 406.) If, however, it is intended to commence forcing so as to procure fruit in February, the soil must be removed, and about four or five barrows of well decomposed leaf mould put in its place. The inner wall of the bed should have a good thick coat of white-wash applied, to fill up any crevices, and thus prevent the steam from the manure from entering the bed. If the leaves or hay between the outer wall and the board frame have settled any, from decay, it must be filled up, and the coping nailed on tight. All is then ready for the sowing of the seed. At this season, fruit may be cut in twelve weeks after the seed is planted.

ART. II. *On the Cultivation of some of the most select Biennial and Perennial Plants, with some Remarks upon their Beauty.* By S. WALKER.

—————“A breath of unadulterate air,
The glimpse of a green pasture, how they cheer
The citizen, and brace his languid frame!
E'en in the stifling bosom of the town,
A garden, in which nothing thrives, has charms
That soothe the rich possessor; much consoled,
That here and there some sprigs of mournful mint,
Of night-shade or valerian, grace the wall
He cultivates. These serve him with a hint
That nature lives; that sight-refreshing green
Is still the livery she delights to wear,
Though sickly samples of the exuberant whole.”

THESE elegant lines from Cowper, are so full of beauty, and soul-stirring spirit, to every lover of Flora, that I have thought them peculiarly adapted to my present purpose as an introduction to a few remarks, upon some of our hardy and beautiful plants, which it is my present intention to make, and which I may, in some future communication, carry out to a more extended length.—My observations will be confined to such plants as, in my estimation, are most deserving of the care, and are most likely to reward the novice in the culture of flowers. I shall not address myself to the initiated cultivator; he will seek better authority, and more detailed information; it is to those who have taken only their first steps in the garden that I would presume to offer myself as a guide,—it is the young and the fair that I wish to see engaged in floral pursuits, and, if they are still more ambitious, in the science of botany. It requires but little effort to begin. The task will not be one of labor, but of pleasure, and perseverance will ensure a reward. Flora may be said rather to give fruition than hope; her rewards are ever in anticipation, and are ever at hand. Let us but for a moment look at her progress; after the healthy recreation of preparing the soil to receive the seed, and it is deposited, the spot becomes sacred, and an object of our anxious care; the germination of the seed is watched until the plant in its first state is realized; over this we hang in fond anticipation of all that shall hereafter delight our senses in richness of color, delicacy of texture, or sweetness of perfume, and in some cases with all these qualities combined; with the strength of the plant our cares and expectations keep pace, our sympathies are all called into action, the rude wind or the scorching rays of the mid-day sun are to be provided against; in some cases, the foliage of the plants, of the same kind, are day by day examined, to ascertain if they in any manner differ from each other in form or color; the least shade in color, the least alteration in form, raises the hopes of the florist; he is full of expecta-

tion that his labors will be rewarded with a new variety, that may add lustre to that particular class of flowers, and that his friends, and the floral world, may delight in beholding one of the handmaids of his goddess in *a new dress*. Such, my readers, are the delights of the lover of nature, and with all this nearly parental care, he may mingle better feelings,—he may, in the midst of his ecstasy of admiration, remember the divine Being who fashioned and painted the object of his pleasure. The botanist with the world before him, the king and the nobleman with his parks, the opulent merchant with his villa, the cottager with his garden, and the mechanic with his pots and tubs placed at his window, while he toils for his daily bread, are each rewarded to the full, out of the never-failing source of pleasure which the garden can dispense. To such of my readers as have made a beginning in the garden, I would say, persevere; to those who think of doing so, I would say, delay not; to such as suppose they have no means, I will give a picture drawn from our favorite and amiable poet.

“The most unfurnished with the means of life,
And they, that never pass their brick wall bounds
To range the fields and treat their lungs with air,
Yet feel the burning instinct: over-head
Suspend their crazy boxes, planted thick,
And watered duly. There the pitcher stands,
A fragment, and the spoutless tea-pot there,—
Sad witnesses how close-pent man regrets
The country; with what ardor he contrives
A peep at nature, when he can no more.”

None need be discouraged; a violet will smell as sweet, bloomed in a broken tea-pot as in a China vase; the rose will bloom as fair, and shed its perfume as far, though bloomed in the poor man's tub or crazy box, as in the rich parterre.

The remarks and description that accompany the list of plants annexed, and those which I may hereafter furnish for publication, will, in some cases, be taken from such sources as I may think best calculated to answer my purpose; when I copy from others, I shall give credit by making the usual quotation marks, but I shall not give the author's name. If the plan now proposed shall meet the approbation of the conductors of the “*American Gardener's Magazine*,” and may in any way be acceptable to its readers, I may, as before remarked, continue this subject at some future time; but, in saying this much, I do not pledge myself so to do.

Yours, &c.

S. WALKER.

Roxbury, March 22d, 1836.

(*To be continued.*)

ART. III. *Some Hints on the importance of improving Cottage Gardens.* By AN OLD FLORIST.

IN looking over the last number of your Magazine, I was much pleased with an article from your correspondent, Mr. R. Murray, respecting the neglected state of cottage gardens, or perhaps, more properly, the gardens of people in moderate circumstances in life, in the immediate vicinity of Boston. This is an important subject for discussion, and one which requires to be handled by persons who are competent to suggest methods for improving them. I have observed, in travelling through the villages in this neighborhood, many places that lay entirely waste, or but very little improved, that might, by bestowing upon them a small portion of time and care, be made a great source of amusement, if not of profit, to the proprietor or occupant. This state of things is apt to strike the eye of persons unaccustomed to such, very unfavorably; and they oftentimes judge precipitately. It is very rare in Britain to see the gardens, even of the poorer cottagers, lie so neglected. A small, neat flower garden in front of the house, in which a few choice flowers are grown, and with the honeysuckle, jessamine, &c., climbing over the walls, and running up the sides and over the door, adds very much to the appearance of the premises, especially if the house is an indifferent one. I have frequently thought, when the subject has occurred to me, that this must in some measure be owing to the very long cold winters which are experienced in this climate, and which prevents gardening from being carried on here but a limited part of the year. Yet, however, I have found, that many plants which I should have expected that the cold winters would have killed, live through them with but little or no protection, and flourish as well as in England.

The horticultural and floral societies which abound throughout Britain has tended greatly to encourage gardening among the people: numerous prizes are awarded to individuals who are not members, but who produce any thing worthy of exhibition. I have never attended a meeting, but what a part of the room has been set off for the productions of the cottagers; and at certain times, the secretary and two or three members visit all the gardens within several miles of the place where their meetings are holden; a report is drawn up of the state in which they find them, and a prize is awarded to the person who keeps his under the highest cultivation. By this means emulation is produced, and the neighbor of the person who has gained a prize, begins to devote his leisure hours to the garden, rather than idle them away in places of dissipation; his family also receive more of his company, and the money that would perhaps have been uselessly spent, is applied to some good purpose. I do not know of any thing that ever gave

me more pleasure, in travelling through the country, than to see a man, in the cool of evening, cleaning and watering his little garden, with his children playing about him.

I am not aware whether all florists' flowers can be successfully cultivated here ; more particularly the picotee, carnation, auricula, polyanthus and ranunculus. They all live through the winters in England without protection, though persons possessing valuable collections generally give them some covering during a few days of severe weather which sometimes occurs. Whether such flowers can be grown with equal success here, I am not able to state, but undoubtedly many of your readers who are more acquainted with the subject than myself, will give their opinions respecting it. I have always been a great admirer of the flower garden, and for many years spent my leisure hours in cultivating many choice kinds, although I never carried it to the extent that many of the "fancy" do. Those persons who have become so thoroughly carried away into the love of florists' flowers as to walk twenty or thirty miles in a hot day in July, to get a sight of a new carnation, and having been gratified with such a view, will almost sell their coats from their backs to obtain a plant, may be truly said to be enthusiasts in the highest degree ; but to that class I did not belong ; nor do I wish to see any person in this community become so deeply imbued with such a feeling ; it would be carrying things too far, and would have an injurious rather than a good effect. But I think that if mechanics, and especially persons employed in manufactories, would spend their leisure hours in the garden, where they have one, and where one could be obtained, they would find it a place of innocent and healthful amusement, and of time well spent. There only wants to be a few examples set, and a stimulus will then be given ; and I have no doubt but that florists' flowers of every kind could be produced, and made to take the place of the weeds your correspondent complains of. I feel unable to do that justice to the subject which it requires, and hope that there are many of your readers, who see its importance, and will not neglect to occasionally remind us of it : at a future time, I may state something upon the culture of some kinds of flowers as gathered from my own practice ; but as I have now trespassed too much upon your room, to the exclusion of more useful matter, with my best wishes for the success of your Magazine, and a hope that you may be rewarded for your labors, I subscribe myself,

Boston, Feb. 1836.

AN OLD FLORIST.

ART. IV. *Beautiful Plants growing wild in the Vicinity of Boston.* By E. B. KENRICK, Watertown.

(Continued from page 57.)

Hedera.

Hedera quinquefolia, *Cissus hederacea*, &c. Common Creeper, Five-leaved Ivy. The common creeper is much cultivated as an ornament of walls. The stems climb to a great altitude, and are supported by radicating tendrils. Leaves smooth, in fives, with stems. Flowers greenish, in branching clusters. Berries of the size of peas, dark blue, acid.—Woods, &c.—July.

Kalmia.

Calyx five-parted; corolla salver-shaped, with ten prominences underneath, and the border five-horned; capsule, or seed vessel, five-celled.

Kalmia angustifolia Narrow-leaved Laurel, Lamb-kill. This little shrub, however fatal to sheep, has exceedingly beautiful flowers. It grows to the height of one or two feet. The leaves stand either scattering, or in threes, with short stems; oblong, lance-formed, blunt at the tip, evergreen, and a little rusty beneath. Flowers deep rose-colored; disposed in corymbs or tansy-like clusters, rising from the shoulders of the leaves, and forming a sort of whirl around the stem.—Common in pastures, swamps, and sandy woods.—June, July.

Kalmia latifolia Broad-leaved Laurel, Mountain Laurel. A very ornamental shrub, generally about four or five feet in elevation. But on the Catskill mountain, Dr. Eaton says it is found more than twenty feet high. Leaves on short stems, and either in threes, or standing without order; evergreen, leathery, very smooth; oval, indented on the edge, acute, or sharp at the tip. In one variety, the flowers are white; in the other, rose-colored. They grow in corymbose clusters, like those of the *Kalmia angustifolia*; but the flowers and clusters are much larger.—Rocky hills; woods at Gloucester, Princeton, Boylston, &c. Not common very near Boston.—June, July.

Laurus.

Laurus Benzoin L. Fever Bush, Spice Bush. An aromatic shrub, from four to ten feet high, with a flavor like benzoin. Leaves smoothish, somewhat hairy, pale beneath, oval, or inverted egg-formed, sharp at base, and a little pointed at the tip. Flowers yellow, in small umbels; appearing when the leaves just begin to expand. Berries scarlet.—Shady, wet places. Near Newton Corner; also, in abundance, a little south-west of Brighton village.—Blossoms early in May.

Ligústrum.

Ligústrum vulgàre L. Privet, Prim. A well known ornamental shrub, six feet or more in height, with smooth, oval, spear-shaped leaves. Remarkable, in summer, for its conical bunches of small white flowers, and in autumn, for its black, shining berries, looking like miniature bunches of grapes.—Frequent in woods and hedges.—May, June.

Lonicera.

The *Lonicera* has a calyx five-toothed ; a corolla long, tubular, with a border in five parts, generally unequal ; and a three-celled many-seeded, distinct berry.

Lonicera hirsùta *Caprifolium pubescens* Hook. Hairy Honeysuckle. A woody vine, said to twine upon trees to the height of twenty or thirty feet. Leaves hairy, nearly stemless, broad egg-shaped, or inverted egg-shaped, pale bluish green beneath, ciliate or eyelashed on the margin ; the upper ones nearly smooth, perforated by the branches. Flowers yellow, hairy, in terminal spikes, forming a sort of head. Berries orange, glandular-pubescent.—Rocky woods.—Grows near Williams College ; likewise, it is said, in Worcester.—June.

Lonicera parviflora. Small yellow Honeysuckle. A climbing shrub, with pale, rough bark. Leaves white, glaucous beneath, wavy, and rolled outward at the edge, mostly without stems, the upper leaves being perfoliate or perforated. Corolla yellow, swelled out at the base, the divisions of its border commonly curled. Stamens bearded. The flowers are smaller than those of the species preceding, and form terminal heads of spikes in circles around the stems. Berries red.—Rocky places ; woods in the western parts of Massachusetts.—Flowers in June.

Magnòlia.

Magnòlia glauca L. Small Magnolia, Beaver Tree, Swamp Laurel. This is believed to be “the only species of its superb genus, that has been found native in New England.” In favorable situations, it forms a small tree. The leaves are perennial, smooth, standing out of order, regular-oval, with stems, but no indentures on the margin. Their under side, except the midrib, is extremely glaucous, being nearly of a light soap-stone color, by which the shrub may be distinguished at a distance. The flowers are solitary, terminal, white, or cream-colored. Calyx in three divisions, obtuse, concave, spathulate, or paddle-shaped. The corolla has from eight to fourteen obtuse, concave petals, contracted at base, and forming a cup-shaped flower. The fruit is a cone, opening longitudinally for the escape of the seeds, which are scarlet, and hang by threads, after falling out. The bark is aromatic. The flowers have something of the odor of the pine-apple. Often cultivated.—“It grows plentifully in a sheltered swamp at Gloucester,

twenty-five miles from Boston,—which is perhaps its northern boundary.”—July.

Menzièsia.

Menzièsia cærùlea. Wahl. Purple Menziesia, Mountain Heath. A beautiful, evergreen, branching, alpine shrub, resembling heath in its foliage and flowers. The leaves are scattered, crowded, linear, and toothed; or not unlike the leaves of the fir tribe. Calyx in five segments, purplish, oblong-linear, obtuse. Corolla purple, bell-shaped, or cylindric-ovate, divided at the mouth into five ear-like segments, their tops being notched.—On the barren summits of the White Mountains.—July.

Méspilus.

Méspilus arbutifòlia, Pyrus arbutifòlia L. Red berried Mespilus. A slender, delicate flowering shrub, from two to four feet high. Leaves small, oblong, oval, or inverted egg-formed, minutely notched, downy beneath, and having the midrib spotted on the upper side, with small, dark glands. Calyx downy, having five segments. Petals five, roundish, concave. Flowers white, with crimson anthers; in compound, downy corymbs, or somewhat umbel-shaped bunches. Fruit scarlet, ten-seeded, sweet and astringent, of the size of large whortleberries.—Low or damp thickets.—May, June.

Prinos.

Prinos verticillàtus L. Black Alder. A shrub six or eight feet in height, loaded in autumn and winter with bunches of scarlet berries, very showy and beautiful. Leaves oval, sharp at base, short stemmed, hairy beneath, notched on the edge, and having a sudden, long, sharp point. Corollas minute, white, six-parted. Flowers in little tufts, nearly stemless, growing in the shoulders of the leaves. Berries bright scarlet, bitter-sweet, in irregular bunches.—Swamps and moist woods.—Brighton.—June, July. A variety of this species has its leaves membranaceous, inverted egg-formed, smooth beneath; and its corolla in but four or five, instead of six divisions.

Prinos ambíguus Mx. Long-leaved Black Alder. This species has its leaves more oblong, less sharply notched, and more protracted at the base, than the *Prinos verticillàtus*; also, its fruit and flowers are not so much in bunches, its bark is paler, and the corollas have but four, instead of six segments or divisions.—Swamps, &c.—Roxbury, Newton.—June, July.

Rhododéndron.

Rhododéndron máximum L. American Rose Bay. A magnificent flowering shrub, too much cultivated to require minute description. According to Dr. Torrey, it forms a small tree, ten or fifteen feet high; but this must be only in localities very favorable. Leaves in tufts at the ends of the branches, evergreen, leathery,

pale beneath, oblong, oval, and acute ; also, whole, even, and rolled outward, on the margin. Calyx small, of five unequal, blunt segments. Corolla funnel-shaped, with a short tube, the border divided into five large, unequal segments, which are white, shaded with lake, the upper and longest having a collection of orange-colored spots at its centre. Flowers in terminal clusters.—In a swamp at Medfield.—July.

Yours,

Watertown, Jan., 1835.

E. B. KENRICK.

(*To be continued.*)

ART. V. *On the Cultivation of Asparagus.* By S. POND.

THE cultivation of asparagus, although so general, is, by no means, as well understood as it should be. Like many other vegetables, which have for years been cultivated, and which almost every gardener thinks he already raises to perfection, and needs no further information in relation to their growth, it can still be wonderfully improved in its mode of cultivation. The immense quantity which is produced in this vicinity, for the market, and its superiority to that of former years, is a convincing proof, that its cultivation is now much better understood than heretofore, and it is to be hoped, that it will still continue to be grown of larger size and more excellent quality. In private gardens, in particular, some fine specimens have been produced within the last two or three years, and, with little more care and expense, the market gardener may as easily supply his customers with this estimable vegetable in equal perfection. It is more with a desire to see our markets better supplied with a superior article, that I am induced to send you these remarks ; and if it will be the means of doing this, even in a small degree, I shall feel well repaid for my trouble.

There are several kinds of asparagus, some of which have been lately introduced, and have not yet become very well known. That which I have grown, and which I have proved to be of most excellent quality, as well as of monstrous size, is called the giant asparagus. It is, as yet, but little known, and, consequently, not very extensively cultivated. But so superior is it to the old kind generally grown, and of which hundreds of plantations now exist, that it must take their place very soon. Some cultivators do not like to destroy fruitful beds, because the kind is rather inferior ; yet I have no doubt but they would be more amply repaid in the end, if they were to make new plantations, and, as soon as they came into bearing, to entirely destroy the old ones. Its large size and fine

appearance, together with its tenderness and flavor, recommend it to the notice of every market gardener, who is desirous of any emulation for his productions, and to every gentleman and amateur, who is ambitious of supplying his table with the most excellent kind.

There has been considerable written upon the culture of asparagus, and there are various opinions respecting the best methods of cultivation. But leaving the reader to choose which system he pleases, I proceed to detail the method I have adopted, and which I have found to be completely successful. It is difficult to persuade those who have, for years, continued to grow any kind of plants, to tolerable perfection, to adopt new modes, with the hope of improving upon the long-trodden path; but the desire, which is increasing among gardeners, to be theorists, as well as experimentalists, will, sooner or later, dispel this idea.

In the month of May, select a spot of ground sufficiently large to plant the number of roots intended; if the plantation is to be large, and intended for supplying the market, the ground should be ploughed to a good depth; if for a common kitchen garden, it should be trenched to the depth of sixteen or twenty inches. Make the surface of the bed level, after this operation is performed. Then proceed to mark out places to dig the trenches for the roots; they should be two and a half feet apart; stretch a line the whole length of the bed, and with a small pointed stick make a drill; draw the next two and a half from this, and so on, to the whole width. Then proceed to throw out the soil six inches each side of the drill, and ten deep, laying it up in ridges between each trench. After this is done, throw in about four inches of manure; level the same, and add about two inches of soil on the surface, scraped from the sides of the trenches; level this also, and all is ready for planting.

There are different opinions respecting the age at which roots should be planted. Some gardeners prefer one year old roots, some two, and some even three; when it is desired to have beds ready for cutting as soon as possible, three year old roots are set out; but I am doubtful whether much, if any thing, is gained by this. For my own planting, I always prefer those two years of age, and rather than set out older ones, I would have those of only one year; the produce may not be so great at first, but in a few years it is much larger. Select such only as have good fibres, and a fine bold crown, throwing out all weak roots. In setting out, place them six inches apart, and lay out the fibres in regular order, and not jumble them together, as is too often done, to the great injury of the plants. Much of their future success, I attribute to the care given in setting out. When all are planted, cover them with about an inch of soil, and the work is all finished. The plants, throughout the summer, must be kept clear of weeds, and occasionally hoed; and by these two operations, and the summer rains, the

trenches will, by October, be filled up as level as the bed was before setting out the roots.

The practice adopted by most, if not all, growers of this vegetable is, to set out the plants in deep trenches, and cover them, at once, six or eight, and in some instances twelve, inches deep. Nothing can be more injurious than this; for a great part of the roots, especially those that are small, seldom make shoots strong enough to force their way through this depth of soil, and they consequently perish; or, if they come up, they are weak and small, and never afterwards attain to any size. It is an old system, and, like that of growing celery, now generally exploded, it should be likewise. In the method I have adopted, the roots have but a slight covering of earth, when planted, and the young shoots come forward very fast; as they increase in vigor, little more is added, till, by the assistance of the heavy summer rains, which wash the soil from the ridges into the trenches, they are completely covered. Scarcely a root has ever failed to grow. Upon the approach of cold weather, and after the tops have been killed by frost, they should be cut down even with the ground, and carried off; the bed should then be covered with two or three inches of fine horse manure, which should remain on until spring, when it must be forked into the surface of the bed. In doing this, be careful not to injure the crowns of the roots. Just before the shoots make their appearance, give the bed a good raking, which will destroy the weeds that are starting to grow. It is a bad practice to plant asparagus beds with radishes, lettuces, peppergrass, &c., as they exhaust the goodness of the soil. The second year, a few of the strongest shoots may be cut; but very sparingly, as the roots will be all the better afterwards. Continue to pursue the same system of culture every year, and the roots will rapidly increase in vigor.

The soil that asparagus seems most to delight in, is a light, rich, and rather sandy one, neither too wet nor too dry; when the soil is shallow, the trenches must not be dug so deep as above recommended. The manure I made use of, was fresh from the hog-pen, and somewhat strawy; but I presume any good manure would answer equally as well. The asparagus is a marine plant, and a light dressing of marsh mud, in the fall or spring, seems to increase the growth of the plants. I would recommend it when it can be easily obtained. Beds prepared in this manner, and yearly attended to, will last for a long length of time, and the produce will be of superior quality.

The plants may be raised from seeds, which should be sown in May, in a rich, sandy soil, in rows twelve or fifteen inches apart, and scattered tolerably thick in the rows. Cover them an inch deep, and when the young plants are up, keep them clear of weeds, and give them frequent hoeings. Pursue the same culture during the summer of the second year, and in the spring of the third they

will be ready for transplanting into beds. I have occasionally exhibited specimens from my bed, at the Massachusetts Horticultural Society's room.

Yours, &c.,

Cambridgeport, March 7th, 1836.

S. POND.

We need hardly recommend the above communication, by Mr. Pond, to the attention of our readers; many of whom have seen the specimens he states as having exhibited, and who can testify to their monstrous size. We have frequently inspected his beds, and can truly say, that we have never observed any in a more flourishing condition. We entirely agree with him, in his remarks upon deep planting. It is one of the absurd systems which abound in empirical gardening, and will soon give way to more rational modes of cultivation. When the committee of the Horticultural Society have said, that the specimens exhibited before them were "of an uncommon magnitude, and deserving of honorable mention in the annals of horticulture," no further remarks from us will be wanted, to convince cultivators of the excellence of Mr. Pond's method of growing this desirable esculent.—*Conds.*

ART. VI. *Notices of new and beautiful Plants figured in the London Floricultural and Botanical Magazines; with some Account of those which it would be desirable to introduce into our Gardens.*

Edwards's Botanical Register, or Ornamental Flower Garden and Shrubbery. Each number containing eight figures of Plants and Shrubs. In monthly numbers; 4s. colored, 3s. plain. Edited by John Lindley, Ph. D., F. R. S., L. S., and G. S., Professor of Botany in the University of London.

Curtis's Botanical Magazine, or Flower Garden Displayed, containing eight plates. In monthly numbers; 3s. 6d. colored, 3s. plain. Edited by William Jackson Hooker, L.L. D., F. R. A., and L. S., Regius Professor of Botany in the University of Glasgow.

Notes relating to Floriculture.—The Christian name of the late Mr. Drummond is Thomas, not James, as frequently written.—(*Gard. Mag.*)

The Baron Von Ludwig, Dr. Hooker states, in the *Botanical Magazine*, for December, is a "nobleman resident at the Cape of Good Hope, where he generously devotes his fortune to the promotion of botany and horticulture, particularly with a view of rendering service to the colony, by the introduction of useful plants. To Europe, he has, with the greatest liberality, communicated many rare South African plants, and has enriched our gardens with several new or little known species." The 9th volume of the

Magazine, new series (62d of the whole work) is inscribed to this gentleman by Dr. Hooker. It is with pleasure that we give our readers this information, as the Baron Ludwig was lately elected an honorary member of the Massachusetts Horticultural Society. A package, of various kinds of Cape seeds, was also presented to the society, received from him, and were distributed among the members. We hope yet, through his liberality, to enrich *our* gardens with the beautiful plants with which the Cape of Good Hope abounds; and, in return, we may render much service to the colony, by sending seeds, both vegetable, tree and flower, particularly, we presume, of the former. By the same conveyance, which took out his diploma, we enclosed a package of several of the most valuable kinds of vegetable seeds, and also all the annual addresses of the Horticultural Society, together with several catalogues of trees and seeds. The influence of the society might be greatly increased, and its services rendered far more valuable than they now are, by a more extensive correspondence with its honorary and corresponding members, and with the horticultural societies both of Europe and this country.

Dr. Lindley has recently published a work, entitled *A Key to Structural, Physiological, and Systematic Botany, for the Use of all Classes*. It is stated, in Loudon's Magazine, to be a more matured edition of the author's *Outlines of the First Principles of Botany*, and of his *Nixis Plantarum*, both included in this one, the *Key*. In this, the natural orders are consociated into groups, "intermediate in the rank of comprehensiveness between the orders themselves, and those few groups of much higher rank," heretofore employed in some works, among which may be mentioned Loudon's *Hortus Britannicus*. We hope, at some future time, to explain this at greater length.

The author has employed some terms in nomenclature, which are thus explained: "To prevent confusion in the use of names of the numerous divisions in the natural system, it is to be observed, that the names of the sub-orders terminate in *ææ*; of the orders, in *aceæ*; of the alliances, in *ales*; and of the groups, in *osæ*. The higher divisions have merely plural terminations. The ear of the classical critic may be offended at many of these terminations; but the distinction which they establish is too important not to outweigh all verbal niceties of construction."

He also states, that he has "ventured to reform the language of botanists, in some respects, by carrying out their own principles to their full extent; thus securing a more uniform kind of nomenclature, and expressing the value" of the classes, orders, &c., by the termination of their names. Such an arrangement must certainly meet with the approbation of all botanists; and Dr. Lindley deserves much credit for this production.

In printing the botanical names, in the present volume, we have

adopted the method suggested by Mr. Loudon, and first brought into practice by him, in his most valuable work, the *Hortus Britannicus*. We have done so, because we wish our Magazine to be as far perfect as is in our power to render it, and to keep pace with the many improvements which are continually making in the science of botany. We also think, that persons unacquainted with botanical names, and who feel diffident in pronouncing them, will, by the aid of the accentuations, have this difficulty, in some measure, removed; and, as many plants, especially those which have, of late years, been introduced, have no common or English names, and must, from necessity, be called by their scientific ones, the importance of this method will be at once perceived. The taste for the study of botany is increasing, and we wish to facilitate it as much as possible. We extract from the Gardener's Magazine the improvements which we have above referred to:—

“We have accented all the scientific names, both of plants and of classes and orders, natural or artificial.”

“In order, if possible, to affix something like meaning to the scientific names, we have distinguished each as belonging to one of the three following classes: 1st, those composed of Greek or Latin words; 2d, those named after men; 3d, those adopted from the botany of antiquity, or to be found in a classical dictionary, (say Lempriere's); and, 4th, those adopted from the aboriginal names, or doubtful. Names of the first class, whether generic or specific, will be found in one kind of type, as *Clerodéndron* and *média*; names of the second class, or in memory of men, will be found to have the letters added to the name in a different type from those composing the original word, as *Banksia* and *Lambertiàna*; classical names are distinguished, by having the first letter in a different type from the rest of the word, as *Pinus* and *pinifolia*; and aboriginal or doubtful names, generic or specific, are wholly in a different type from that of the words which precede or follow them, as *Araucària* and *Aliôga*. The advantage of this plan is, that all those words not distinguished by some variation in the type, may be found in a Greek or Latin dictionary, either single, as *Hypoëstes*, or in compounds, as *rhodon*, a rose, and *dendron*, a tree; and as to other words, if much is not gained by knowing that they are classical, aboriginal, or commemorative, at least, mystery is removed, and a certain degree of interest communicated.”

When English names are given, it is frequently convenient to add some “word or words descriptive of the plant;” these additions are in a different type, as *Sálvia coccínea*, scarlet-flowered Sage. By a continual use of these improvements, Latin names, in frequent use in botany, become familiar, and their meaning better understood. This latter improvement we have not yet generally adopted; but we intend to do so in our future numbers.

DICOTYLEDONOUS, POLYPETALOUS, PLANTS.

Ternströmiaceæ.

CAMELLIA.

Since our last, several new varieties have been in flower, in the vicinity. Among others, *rosæflora* and *Weimària*, in Mr. Sweetser's collection. The latter is a single white flower, of great beauty; the stamens are very numerous, and spread out much in the style of those of a *cereus*. The plant was very small, and the flower consequently weak. *C. reticulata* has been in full bloom both at Mr. Wilder's and in our collection. Park's rose stripe has also been in flower; its fragrance is very perceptible; and on this account alone, aside from its beauty, which is considerably attractive, it should be in every collection. We have now in bloom *cinnna*; it is somewhat like *eximia* of the English collections. *C. j. corallina*, of some French catalogues, seems to be synonymous with *florida* of the English.

*Hypericaceæ.*OCHRA'NTHE *Lindl.*

arguta Lindl. A green-house plant; with white flowers; a native of China. Bot. Reg., t. 1819.

A shrub introduced from China to the Horticultural Society's garden at Chiswick, where it flowered as long ago as 1826. The plant died a short time afterwards, and has never been seen since. A drawing was taken at the time, and has been kept ever since, with the hope, that it might be again discovered, and accurately described by the fruit. Dr. Lindley states that he was unable even to obtain "an approximation to its true station in the system." It is a pretty plant, from the representation of the plate, but as it is lost to England, and may be a long time before it is again introduced, a particular description will not be of much interest. (*Bot. Reg.*, Dec.)

Rosaceæ.

RUBUS

nutkanus De Cand. Nutka Bramble. A hardy shrub; flowers white; appearing in the summer; propagated like the other species; a native of North-west America. Bot. Mag., t. 3453.

"A large flowered, handsome" species, "nearly allied to the *R. odoratus*, or flowering raspberry." The leaves are large, cordate, five-lobed, doubly serrate, and copiously reticulated with veins. The flowers large and white, with numerous stamens and yellow anthers. It was discovered by A. Menzies, Esq., during the voyage of Captain Vancouver, at Queen Charlotte's Sound, in lat. 51° on the North-West Coast; since by Mr. Douglas, extending from 43° in North California, to 52° at Nootka Sound. He also found it extending to the interior to the head of the Columbia river. By Mr. Drummond it was detected on the eastern declivity of the Rocky mountains, in lat 52°. (*Bot. Mag.*, Dec.)

Oxalidaceæ.

O'XALIS

Piötte. Col. Piotta's Oxalis. A half-hardy perennial, with reddish yellow flowers; appearing in July and August: propagated by offsets, in rich, sandy loam; a native of the Cape of Good Hope. *Bot. Reg.*, 1817.

"A truly beautiful little half-hardy, or frame perennial, flowering most copiously during the months of July and August." It does not produce much of an appearance in the border; but "a large pot filled with its dense green leaves, and covered with the large, salmon-colored flowers, is a lovely object." In this respect it is somewhat similar to *O. Déppeii*, which flowered with us last season. It is supposed a native of the Cape of Good Hope, and was received from Professor Savi, of Pisa, as also from other botanic gardens in Italy. The drawing was made from plants, which flowered in the collection of Mrs. Marryatt, who is the only possessor of it in England. (*Bot. Reg.*, Dec.)

Polygonaceæ.

COCCO'LOBA *Lindl.* (from *kokkos*, fruit, and *lobos*, a lobe; in allusion to the lobed seeds.) *virens Lindl.* Green sea-side Grape. A hot-house plant; with white flowers; appearing in August; supposed a native of the West Indies. *Bot. Reg.*, t. 1816.

"Communicated from Wormleybury, by Sir Abraham Hume, with whom it flowered in August, 1833," under the name of *exco-riata*, which is very different. The flowers appear in drooping racemes; and are not very showy. Native country supposed the West Indies. (*Bot. Reg.*, Dec.)

DICOTYLEDONOUS, MONOPETALOUS, PLANTS.

Ericaceæ.

RHODODE'NDRON

var. *pulcherrimum Lindl.* "The lovely" Rhododendron.

Between *R. arboreum* and *R. caucasicum*. A hardy evergreen shrub, with flowers of a light rose color; a hybrid variety. *Bot. Reg.* t., 1820.

A very beautiful variety, produced by Mr. Waterer, of Knaphill, between *R. arboreum* and *caucasicum*. It has the compact appearance, in the unbel of flowers, of the latter. It is "an abundant flowerer." (*Bot. Reg.*, Dec.)

var. *Nobleddnum Hort.* Noble's Rhododendron.

A hardy evergreen shrub, with flowers of a deep and brilliant rose color; a hybrid variety. *Bot. Reg.*, t. 1820.

Very much like *pulcherrimum*, in all respects, "except that its flowers are of a deep and brilliant rose color." Both are stated to be "among the handsomest hardy shrubs in cultivation." (*Bot. Reg.*, Dec.)

máximum var. *hybridum Hook.* *R. frágrans Hort.* Laurel-leaved Rhododendron.

Supposed between *R. gláuca* (*Azàlea gláuca*) and *R. máximum*. A hardy shrub, with white flowers tinged with pink; a hybrid variety. *Bot. Mag.*, t. 3454.

"A charming plant," cultivated in the Glasgow botanic garden, under the name of *R. frágrans*. Dr. Hooker states that it has every appearance of a hybrid, and refers it to a figure in the *Bot. Reg.*, t. 195, as a synonym. The flowers are delicate, in large umbels; anthers yellow. "Whatever may be its origin, it is amply worthy a place in every flower-garden and shrubbery." (*Bot. Mag.*, Dec.)

In our collection are now in full bloom *Rhododéndron arbóreum* var. *álta clerénse*, var. *hybridum*, and var. *Russelliánum*. Of varieties, of *R. indicum*, *Smíthii*, *cærúlea*, *phœnicea*, and *puníceá*. *R. sinénsis* is also superbly elegant, with its clusters of bright yellow, and highly odoriferous blossoms, numbering from twenty to twenty-five in each. *R. álta clerénse* must certainly rank as the most magnificent that has yet been produced, whether a species or a variety. There is a richness about it, which is not found in any of the others, which we have seen in flower. Some of the clusters were of monstrous size. If it can but be acclimated to our gardens, it would be one of the most valuable acquisitions which they will, for a long time, receive. Several plants of *R. arbóreum* var. *hybridum* will be in bloom about the middle of May, together with several fine varieties of *R. póntica*, *calendulácea*, &c.

Asteràcæ.

HELICHRYSUM (an old Greek name, meaning a *golden spiral*, and consequently should be written *Helichrysum*.)

bícolor *Lindl.* Two-colored *Helichrysum*. A hardy annual; with yellow flowers; appearing in August; a native of Van Dieman's Land. *Bot. Reg.*, t. 1814.

"A beautiful, new, hardy annual, introduced by Mr. Low, of the Clapton nursery. The leaves are linear lanceolate. It has a similar appearance to what is commonly called *Xeránthemum lucidum* (*H. bracteátum*), but rather more elegant. "One of the prettiest new species of the season [1835], that has just passed by." (*Bot. Reg.*, Dec.)

GALATELLA *Cass.*

punctata *Nees* *Aster punctatus* *W. & Kit.* *Galatella intermèdia* *Cass.* *Aster desertorum* *Fisch.* dotted *Galatella*. A hardy perennial herbaceous plant; growing two feet high; with reddish lilac flowers; appearing in July and August; a native of the east of Europe; propagated by division of the root, in common garden soil. *Bot. Reg.*, 1818.

An herbaceous plant, "a native of salt marshes in Hungary, Podolia, and elsewhere in the east of Europe." It is very similar to *G. hyssopifolia* and *ácris*. Like the asters, from which this genus has been separated, the species are very difficult to distinguish. Its beauty is inferior to many of our wild ones which enliven our pastures with their numerous blossoms, in the months of August and September. Desirable, as it is "well adapted for borders of shrubberies, and for places where shade-loving plants alone will grow." (*Bot. Reg.*, Dec.)

BE'LLIS

integrifolia *Michx.* *Eclipta integrifolia* *Spreng.* *Brachycome xanthocomoides* *Less.* American Daisy. An annual plant, growing six or eight inches high; flowers pale pink; appearing in June and July; propagated by seeds; a native of North America. *Bot. Mag.*, 3455.

This is the only species of the daisy yet discovered in this country. It was found by Michaux. Pursh had never seen it in his travels; and when Mr. Nuttall wrote his *Genera of North American Plants*, he knew nothing of it, except what he gathered from Michaux; he seems to have doubted his authority, as he asked the following question: "Is it not an *Eclipta*?" From this, an opinion has gained ground with botanists, that none of the species of the fa-

vorite daisy of England were indigenous to America. Mr. Nuttall did, however, discover it in his last visit to Arkansas, growing upon the prairies. Dr. Short has also found it abundant in Kentucky; and latterly, Mr. Drummond gathered it both at Rio Brazos and San Felipe de Austin, in the Texas, and sent to England seeds, and numerous specimens, from which plants have been raised, which flowered the last season in the Glasgow botanic garden. It is an interesting little plant, and, we hope, will be speedily introduced to our gardens. There are many associations connected with the name of this flower; and we should feel more attached to this, a native of our own clime, than to the one which is known in every garden, large or small, and as generally esteemed. The flowers are what is commonly termed single, the number of the petals of the ray fourteen to twenty, of a delicate white, tinged with purple. Peduncles terminal, and single-flowered. According to Michaux, an inhabitant of shady hills and banks of rivers in Tennessee. (*Bot. Mag.*, Dec.)

CALLIOPSIS.

A variety of *Calliopsis bicolor* (*Coreopsis tinctoria Nut.*), called *atrosanguinea* is figured in Paxton's Magazine of Botany for December. It resembles its parent, with the exception of the dark color, which reaches nearly to the edge of the petals. Nothing is known of its introduction; the seeds were received from Mr. Knight, of the King's Road, under the name of *C. sanguinea*. In Sweet's Brit. Flow. Garden, for the same month, is figured *C. Drummondii*, which, we presume, must be the same thing. It is named in honor of its "indefatigable discoverer." The figure in the latter, is "from plants which blossomed in Dr. Neill's collection," Canon-mills, near Edinburgh.

Cinchonacæ.

RONDELETIA.

A beautiful species of this fine genus, named *speciosa*, is figured in Paxton's Magazine of Botany for December. It was figured in the *Botanical Cabinet*, of the Messrs. Loddiges, two or three years since. They received it from Havana, in 1830, where it is native. It requires the heat of the stove. The flowers are of a deep rose color, and appear in corymbs, something like *Ixora coccinea*. Extremely desirable for the stove.

Hydrophyllacæ.

PHACELIA

congesta Hook. Cluster-flowered Phacelia. An annual plant; growing a foot or more in height; with ornamental flowers; appearing in June; color purplish-blue; a native of the Texas; cultivated by seeds. *Bot. Mag.*, 3452.

This is called a "beautiful species," (*Dr. Hooker.*) It was received at the Glasgow botanic garden, among the "many interesting plants," last sent home by the late Mr. Drummond, having been collected by him in that "interesting country," the Texas.

Its nearest affinity is *P. bipinnatifida Michx.*, a native of the Alleghany mountains. Root annual. Stem branched in cultivated specimens. Leaves pinnated; the ultimate ones bipinnatifid; all slightly downy. Peduncles lateral and terminal, bearing from three to five dense corymbose racemes of purplish-blue flowers. Corolla broadly campanulate. Anthers yellow. It will probably soon become common, as it seeds freely. (*Bot. Mag.*, Dec.)

Liliæcæ.

VELTHEIMIA

glauca var. *floribus rubescenti-purpureis Hook.* Red purple-flowered Veltheimia. A bulbous-rooted green-house plant; growing a foot high; flowers ornamental; color reddish; a native of the Cape of Good Hope; propagated by offsets in rich mould. *Bot. Mag.*, 3456.

A "handsome Cape bulb," sent to the Glasgow botanic garden by the Baron Von Ludwig, whom we have, in another place in this number, spoken of. It is quite a different color from the parent species. (*Bot. Mag.*, Dec.)

Orchidæcæ.

EPIDE'NDRUM.

conopseum Brown E. Magnoliæ Muhl. Florida Epidendrum. A parasitical epiphyte; growing four or five inches high; with small, pretty flowers, of a yellowish green color; a native of North America; propagated by division of the root in peat and rotten wood. *Bot. Mag.*, 3457.

"Interesting" (to English botanists) as the only parasitical plant yet discovered in the United States. It was first seen by Bartram, in Florida; plants were sent over in Mr. Drummond's last despatches, to England. Mr. Gordon also communicated specimens to the Messrs. Sheperds, of Liverpool, some time since, from which the figure was taken; the plants were attached to branches of the *Magnolia grandiflora*, on which it is generally found growing, though sometimes "on the trunk of oaks." It does not possess much beauty. (*Bot. Mag.*, Dec.)

We have now in beautiful bloom, in the green-house, *Cypripedium acaule Ait.* *C. humile* of *Sw.* *Salisbury* and *Willd.*, and *C. parviflorum Willd.* *C. Calcèolus Michx.* The former is well known as growing indigenous, in this vicinity; the latter is not found here, but grows plentifully in Vermont and New Hampshire. We received these plants from a friend in Vermont, who writes us, that he has growing in his garden a very pale-colored variety, and also a white one; this, he thinks, may be caused by the localities in which they grow; if, however, they remain permanent, we have been kindly promised plants. All the cypripediums are beautiful plants, and flower finely in the green-house; the *parviflorum* is of an extremely fine yellow color; it has been in flower several days. We should be glad to see this tribe of plants in every garden; they are not difficult of cultivation. If a peat bed is made in a rather shady place, and the plants carefully taken up from their native habitats, and removed thereto, they will continue to flourish and increase. The orchises may be placed in the same situations. Several splendid species have lately been introduced from Nepaul; they are yet, however, rare in English collections, and will not, probably, become common for some time.

REVIEWS.

ART. I. *The Gardener's Magazine and Register of Rural and Domestic Improvements.* Conducted by J. C. Loudon, F. L. S., H. S., &c. In Monthly Numbers. 8vo. 1s. 6d. each. No LXIX for December.

THE number of this valuable Magazine for December contains a long article, by the conductor, of upwards of twenty-five pages, entitled "A Summary View of the Progress of Gardening, and of rural Improvement generally, in Britain, during the past year; with some notices relative to the state of both in foreign countries."

In taking a view of the progress of gardening, the conductor has made two principal divisions, viz.,—Gardening as an art, and the Statistics of Gardening. Under the former is included landscape gardening, arboriculture, floriculture, and horticulture.

Landscape gardening is, as yet, the least understood of any department. According to some, no such thing existed, until the modern or natural style of laying out grounds was introduced; according to others, it includes every mode of laying out grounds, either ancient or modern. Used in this latter sense, the conductor claims the merit of having, in the several volumes of the Magazine, distinguished and defined the four different modes of creating artificial landscapes, which constitute the geometrical, the picturesque, the gardenesque, and the rural styles. These are, we apprehend, not generally understood, and we therefore extract the following remarks, and commend them to the attention of every reader:—

"The geometrical style consists in laying out and planting grounds in geometrical figures. The picturesque style is characterized, in regard to means, by the trees and shrubs being planted at irregular distances, as they are in natural forests and forest groups; and, in regard to effect, by its forming such masses of wood, and groups of trees and shrubs, and such a general union of these in compositions, as will look well, if painted. The gardenesque style of landscape is characterized, as to means, by the trees, shrubs, and herbaceous plants, whether in masses or groups, being planted at such distances as never to be allowed to touch each other; and, in regard to effect, by masses and groups, which, while they show the form of each individual tree and shrub at a near view, yet, at a distance, form masses and groups such as, though they would not be made choice of, in preference, yet would not be rejected by a landscape-painter. Comparing the picturesque and the gardenesque styles of landscape, the former may be said to study most the effect of the whole, as a picture or landscape, which might be painted; and the latter the beauties of the whole, as a garden scene for walking in, and enjoying the trees and plants individually. Compared as to the intensity and duration of the enjoyment, the picturesque style may be said to address itself chiefly to one class of admirers, viz., the lovers of landscape scenery; and the gardenesque not only to the lovers of landscape scenery, but to the bot-

anist and the gardener. The latter, therefore, embracing, as it does, more than one kind of beauty, stands higher in the scale of art, than the former. Rural, or natural, landscape is characterized by being rural, or natural, as contrasted with the artificial scenery by which it is, or may be, surrounded, in the given locality: it becomes, therefore, only an art, when it is known to be the work of man. To us it appears that, when the terms designating these four styles are properly understood, so as to be readily applied to artificial scenery, by gardeners, it will be of essential service to them, in laying out grounds: it will prevent them from endeavoring to bring together, in the same garden or scene, beauties, which are incompatible with each other: for example, the gardenesque and the picturesque, in the same shrubbery, or on the same lawn; or, in other words, handsome single specimens and picturesque groups: or from attempting to combine the gardenesque with the natural; in other words, from mixing portions of what may be called highly refined scenery, composed of exotic trees and plants, with fine turf and gravel, with portions of the ordinary nature of the locality. The introduction of herbaceous flowers among trees and shrubs is a subject connected with landscape-gardening, which, at present, is not at all understood by practical men. When herbaceous flowers are introduced in picturesque scenery, they ought to be allowed to run wild, and the surface on which they are planted should never, in the slightest degree, be cultivated; but when they are introduced into gardenesque scenery, it must only be in situations where the particular kind of plant will thrive and come to perfection; and the ground about each plant must be highly cultivated. In the rural style, no foreign plants whatever, and no marks of culture, must appear."

In the department of *arboriculture*, considerable has been done; many new arboretums have been begun, and others partially completed; the taste for planting them is upon the increase, and no place of any distinction will long be considered complete without one. We wish that this love of hardy trees and shrubs was more common among our amateur gardeners, and gentlemen, possessing fine residences in the vicinity of our large cities. The taste for exotics, which need protection during our severe winters, and various florists' flowers, which require much care, has rapidly increased within a few years, and it will also, we most sincerely hope, continue to, for years to come. Still, we would not have it exclude a love for ornamental plantations of hardy trees and shrubs, collected from all parts of our country, and from foreign climes of the same temperature, or where such can be found as will be hardy when transferred to our gardens. The former is a taste which, though perhaps more general, because the objects are more rare, is certainly a much less refined as well as a less pleasing one. We stop to admire the modest violet or the gorgeous tulip, while we pass a humble shrub or the majestic oak, as a common object. The former are beautiful, while their delicate or magnificent blossoms appear; but as soon as these are gone, their foliage presents little for admiration. How different is it with the latter! In flower or out of flower, they are ever interesting. The bursting of the buds in the spring,—the opening of the blossoms,—the mature foliage,—the ripening fruit,—and, in autumn, the gay and varied colors of

their foliage, are all,—all, objects of admiration ; and even in winter, how interesting to the lover of nature is even the beautiful ramification of their leafless branches ! When our shrubberies can be filled with mountain laurels, rhododendrons, azaleas, and such truly splendid shrubs, shall we let the dazzling beauty of the tulip, or the splendor of the camellia satisfy us ? Should we give all our attention to the latter, to the entire exclusion of the former ? We sincerely hope not ; and we would again, as we often have, invite our readers to give more attention to the subject.

Floriculture is, at the present time, the most flourishing department of gardening in England. Dahlias and heartseases are some of the greatest articles of commerce. The establishment of two floricultural societies in London has been eminently useful in spreading a greater taste for these flowers. Great importations of Ghent azaleas and French roses have been made within a few years. A large number of hybrid plants have been lately produced in English gardens.

The most fashionable house plants, at this time, are the *Orchidææ*. Many new species are imported every year, and their culture is becoming much better understood than heretofore. There is scarcely a collection of plants of any notoriety, but what includes a large number of them.

In *horticulture*, the coiling system of vines first brought to notice by Mr. Mearns, and which we have often spoken of, has attracted more attention than any other subject. Its merits are, however, not yet considered much by practical men. So far as we have heard, from those who adopted the system in our vicinity, the same has been the result. The London Horticultural Society, owing to pecuniary circumstances, has given up the cultivation of culinary vegetables. This is much regretted, as the quality and value of all newly introduced plants was then ascertained and reported in their *Transactions*, and from them, became generally known, and, consequently, brought into cultivation, by the agency of seed stores, where every thing can be procured. A method of “compressing herbs into cakes, and preserving them closely wrapped up in paper till wanted for use, has been practised by Mr. Lindsay, gardener to his grace the Duke of Devonshire, at Chiswick.” The conductor observes, that it well deserves imitation, and might be extended to parsley, fennel, &c. Our transatlantic friends are behind the age in some things. The Shakers, in the New England States, have, for years, pursued this practice, and carry on a considerable business in the article of dried herbs.

Botanical and horticultural gardens are on the increase in England. Some new palm-houses are contemplated. The Earl of Mountnorris has sent a collector to New Zealand, in the hope of discovering some new ligneous plants in the mountainous parts of

that country. Cottage gardens have been much improved, and the conductor remarks as follows:—

“It has been observed to us, by others, and we have observed it ourselves, during our occasional tours, that the gardens of cottagers by the road side, have wonderfully improved within these few years; and we have before often observed that, in many parts of the country, dahlias, fuchsias, and other new plants are to be seen in them, which were formerly confined to gentlemen's gardens. This improvement, as we have elsewhere stated, is chiefly owing to the exertions of the horticultural societies, and partly, also, to the benevolent and patriotic exertions of some gentlemen, who authorise their head gardeners to supply the cottagers on their estates with such useful and ornamental plants as can be spared, and are suitable for cottage gardens. Various gentlemen, also, in different parts of the country, require their head gardeners to keep a nursery of fruit trees and fruit shrubs, to be given away to their farmers and cottagers. When we consider how greatly the beauty of the margins of all our roads is increased by this practice, and how much it tends to increase the comfort and happiness of the cottager, we cannot too highly express our admiration of such practices. We only wish they might prevail every where, and that every proprietor of land in Great Britain or Ireland would adopt them.”

Commercial gardening is rather in a declining state; the supply being greater than the demand. Were it not for the immense number of plants which are annually exported to this country, it would be much more depressed than it now is. Nurseries have become very general throughout England, and those around the metropolis make but few sales compared with those of former years. Their articles are now limited to such as are new and rare, the more common being little sought after. It has always been a wonder with individuals who import plants to this country, why they should remain so high at the present time, especially those sorts which have for years been in the English nurseries. This is, no doubt, owing, in a great measure, to the high rents which are paid for land, near the cities of London and Liverpool, where only such plants are grown as are wanted here. To this cause, and long credits, the conductor attributes the high prices, and remarks that “nurserymen will find, that, by calculating on small profits and extensive sales, they will be greater gainers than by relying on high prices and select purchasers at indefinite credits.” “This,” he says, “indeed is the spirit of the age, which it is in vain, for any person that would live and thrive, long to resist.” We most cordially agree with these observations, and would ask the nurserymen of our own country, and especially those in our vicinity, whether *they* would not also be the greater gainers, if they were guided by this principle. It is useless to hold up articles, because, they are not necessary to the absolute wants of life, at a price which none but the solely affluent can purchase; while persons of more humble means would most gladly avail themselves of the opportunity to buy at reasonable rates. The “spirit of the age” does, indeed, demand

a reform in this matter. Considerable business is stated to be done between the English and American seedsmen.

The state of gardening in various countries, occupies a considerable space. In France, a taste for gardening is on the increase; nurseries have increased, and the intercourse between the seedsmen of France and Britain, and also America, has greatly increased. M. Vilmorin & Co. are the greatest seedsmen in Europe. The export of bulbs from Holland has greatly increased within a few years. In Belgium, the king has introduced "extensive ranges of houses and pits," into the garden attached to the palace of Lacken, near Brussels. In other foreign countries, nothing very remarkable appears to have occurred in the science of gardening. A taste for its pursuit is generally on the increase.

In this country, gardening is noticed as "making rapid progress." The horticultural societies are mentioned, as well as "two gardening magazines," and other journals of agriculture. Little yet, however, seems to be known of the actual state in which gardening exists in this country. Some gardens are said to belong to wealthy merchants in the neighborhood of Philadelphia, which information was gathered from our magazine. But Boston, with its vicinity, is not mentioned. The conductor anticipates among the citizens of the western world, municipal gardens, parks, pleasure-grounds, and hot-houses, the common property of the towns, which will rival those of the European aristocracy." We indeed, expect much ourselves; but we are afraid that it will be many years before such anticipations are realized. We hope, before the next annual view of the progress of gardening shall appear, that the conductor will have gathered more information respecting its advancement in the United States.

A long article on laying out Public Gardens and Promenades, also by the conductor, occupies many pages.

ART. II. *A Practical Treatise on the Culture of Silk, adapted to the Soil and Climate of the United States.* By F. G. Comstock, Secretary of the Hartford County Silk Society, and Editor of the Silk Culturist. 1 vol. 12mo. pp. 108. Hartford: Wm. G. Comstock. 1836.

ALTHOUGH the subject upon which this work treats, may not come precisely within the limits of our Magazine, still we cannot omit to notice it, under the present state of public excitement, in

relation to the culture of silk as an article of domestic produce. We need not here speak of the benefits which, we think, this country will receive from the attention which is now being given to it. We have before incidentally expressed our mind, and we can but repeat, that we are every day more convinced of its practicability and its importance. The present work is one of the best, which has yet been published ; and, with that of Mr. Cobb, contains all the information that is needed upon the subject. Mr. Comstock is well known as the editor of the *Silk Culturist* ; a work, having a great circulation throughout the country, and he has collected from all sources, for which he has numerous facilities, and has brought together such facts and statements as cannot fail to convince every one of the certainty of a good return to those who are willing to embark in the enterprise. The work is printed in a neat type, on good paper, and we recommend it to the attention of all interested in the culture of mulberry trees, and the rearing of silk worms.

ART. III. *The Year Book : an Astronomical and Philosophical Annual : fitted for general use in all parts of the United States.* By Marshall Conant. 1 vol. 12mo. Upwards of 200 pages. Munroe & Francis : Boston. Charles S. Francis : New York.

WE were favored, some time since, with a copy of this work, by the publishers, which we now take the opportunity to recommend to the notice of gardeners, who, besides their profession, are ambitious of acquiring some knowledge of astronomy, philosophy, &c. It contains, in addition to an excellent almanac, much useful and valuable information on general subjects. It is divided into three parts ;—astronomy,—calendar for 1836,—and the Year Book. The latter part contains miscellaneous articles, foreign and domestic notices of recent inventions and discoveries in the more practical departments of science and the arts. It is printed in a beautiful type, and will be an acquisition to the library.

MISCELLANEOUS INTELLIGENCE.

ART. I. *General Notices.*

Scientific Fecundation.—Bradley, speaking of this subject, says that, on the first opening of his tulips, he took out all the stamens before the farina was ready to be scattered; and thus, to use his own expression, castrated the tulips, preparatory to impregnating the stigmas with the farina of other tulips. In like manner, he says, the blossoms of any other plant may be castrated, and cross-fecundated. (*New Improvement of Planting and Gardening, Philosophical and Practical*, p. 14, 15.) It is generally considered that this practice of cross-fecundation is quite new, and was first employed by Mr. Knight; but a careful perusal of the works of Bradley and Agricola will show that scarcely any thing new has been produced, during the present century, that was not known and practised in the preceding one, perhaps earlier.—(*Gard. Mag., for Dec.*)

The superiority of sets of potatoes to whole ones has been fully proved by several English cultivators. The crop has fallen off greatly within the last two years in Great Britain, and numerous experiments have been instituted, which, although they have not given a result altogether satisfactory, have shown that potato sets may lose their vital principle when taken up before they have arrived at a certain degree of maturity. Mr. Niven, in the *Irish Gardener's and Farmer's Magazine*, thinks that the failure of the crop in Ireland may have been partly owing to some change in the electric state of the atmosphere, and partly to the careless manner in which the potato is treated after it has been dug out of the ground till it is replanted. The superiority of whole potatoes to sets, when an early crop is desired, has been proved by Mr. Niven, in the same paper; and also the superiority of sets to whole potatoes, when the object is a main crop, more especially when the bud, or rose end, as it is called in Ireland, is used. This superiority of sets to whole potatoes has been also proved by the experiments conducted in the Horticultural Society's garden, and by various other cultivators.—(*Ib.*)

ART. II. *Foreign Notices.*

Trifolium incarnatum.—The culture of this species of clover has greatly increased in different parts of Great Britain; it stands heat and drought exceedingly well, and has been found, in many cases, a valuable substitute for lucerne and clover, which has been completely burnt up. We hope its value will be tried in our climate.—*Conds.*

Heaviest gooseberries for 1835.—Mr. Saul, in the *Gardener's Magazine* for Dec., has given the weight of the heaviest kinds produced in 1835. He states that they were lighter in this season than they have been for ten years, owing to the very dry season. Fewer seedlings have also been raised. The following is the weight of the heaviest ones:—

Red. Wonderful, 24 dwt.; Companion, 23 dwt. 2 gr.; Lion's Provider, 22 dwt. 6 gr.; Lion, 22 dwt.—*Yellow.* Leader, 23 dwt. 12 gr.; Gunner, 21 dwt. 10 gr.; Sovereign, 20 dwt. 20 gr.; Two to One, 19 dwt. 22 gr.—*Green.* Thumper, 20 dwt. 8 gr.; Peacock, 20 dwt. 6 gr.; Providence, 20

dwt.; Lord Crew, 19 dwt. 20 gr.—*White*. Eagle, 21 dwt.; Ostrich, 20 dwt. 12 gr.; Fleur de Lis, 20 dwt. 12 gr.; Lily of the Valley, 20 dwt. 11 gr. (*Gard. Mag.*)

Prize dahlias.—The following are the varieties which carried off the first prizes at the Cambridge Florists' Society. Among the names of the exhibitors are Messrs. Widnall & Brewer, well known as two of the finest dahlia growers in England:—

The best dahlia of any color.—Widnall's Perfection. *Crimson, scarlet, or red*.—Countess of Liverpool. *White, or shaded white*.—Lady Fordwick. *Very dark*.—Metropolitan Perfection. *Orange, salmon or buff*.—Widnall's Prince of Orange. *Purple or shaded purple*.—Douglas's Augusta. *Stripes of all colors*.—A seedling raised by Mr. Widnall. *Light ground, edged, or mottled*.—Hon. Mrs. Harris. *Yellow, or sulphur*.—Yellow Perfection. *Rose, or rosy crimson*.—Widnall's Perfection. *Lilac*.—Lilac Perfection. *Claret, or puce*.—Widnall's Granta.—(*Flori. Cab.*)

Mr. Widnall gained the most prizes. The Countess of Liverpool yet stands preëminent among the *scarlets*.—*Conds.*

Scale for showing the comparative hardiness of Trees.—There are many trees, generally considered as hardy, which will not stand except in favorable situations; and others, called tender, which do very well occasionally in the open air. From observing this, it has struck me that the distinctions of hardy and tender, are too broad and too vague, to give an exact idea of the treatment they require; and I conceive that you would do a great service to planters, and to the cause of arboriculture generally, if you were to publish a scale marked thus:—*Pinus sylvestris*, н н н, very hardy. Portugal laurel, н. н, tolerably hardy. *Arbutus U'nedo*, н, very hardy. *Laurus nobilis*, т, tender. *Magnolia grandiflora*, т т, very tender. Myrtle, or camellia, т т т, extremely tender. Pomegranate, or the genus *Citrus*, ф, requiring a frame.—(*J. Phillips, Gard. Mag.*)

Hamamelis virginica.—This tree is now beautifully in flower at Messrs. Loddiges's, and in Thompson's Nursery, Mile End. Its yellow blossoms, with their long fringe-like corollas, at this season of the year, when so few trees and shrubs are in flower, are most ornamental; its leaves die off of a rich deep yellow or orange. It is a pity to see such a tree so much neglected. Mr. Macnab, Jr., whose interesting journey in North America we noticed in p. 620, and shall have occasion to recur to, informs us that it attains the height of 15 feet or 20 feet, in its native situations in America; and he brought home a piece of the trunk of one tree, for a gentleman, (Mr. Nicol, of Edinburgh) who is now making observations on different sorts of timber, between five and six inches in diameter.—(*Gard. Mag.*) This is a fine indigenous shrub, or small tree, which we wish was more generally planted in our shrubberies. Its rich-colored foliage, in autumn, adds greatly to the beauty of the scenery in its native situations.—*Conds.*

ART. III. Domestic Notices.

Strawberries.—At Belmont Place, strawberries were cut, the last week in March, of fine size; they were produced on plants which were placed on a shelf on the back wall of the stove. We wish this most delicious fruit was more extensively forced in stoves and hot-beds. A few pots well managed, will produce considerable fruit, and the room they would occupy would be very small, compared with that required for other fruits.—*Conds.*

Forced Beans.—These have been produced, at the above place, for several weeks, from plants in pots, placed on the front curb of the stove. The beans were planted in the latter part of December. The vines have been destroyed, and a new crop is now up in the same pots.—*Ib.*

Primula prænitens var. *alba finbriata*.—A seedling of this primrose, with a beautiful fringed edge, has lately flowered in the garden of Wm. G. Buckner, Esq., Bloomingdale, N. Y., under the care of Mr. T. Dunlap. In our last, our correspondent, A. J. D. (p. 99) speaks of plants of the purple and white, with *fringed* edges, in the collection of J. W. Knevels, Newburgh, N. Y. Were it not for this, Mr. Dunlap might claim the merit of first having originated this beautiful variety.—*Ib.*

Ranunculuses in Pots.—We have lately seen growing, and finely in bloom, in the green-house of Mr. Sweetser, Cambridgeport, several pots of ranunculuses. They were planted in pots, about ten inches deep (which were made for hyacinth bulbs), ten or twelve in each. In one pot, we counted twelve strong buds, besides several blossoms. We have no hesitation in saying, that, if the roots are planted in deep pots or boxes, they can be forced with the same facility as the hyacinth or narcissus. It is generally recommended to grow them in shallow boxes, from the supposition, we presume, that, as the roots are small, they need but little earth to grow in. This is a great error; they require much nourishment, and will not flourish unless they have it. Some of the flowers were exceedingly large. Any person who is desirous of growing them, can easily do so by adopting the method above named.—*Ib.*

Zinc Labels for marking Plants.—We have been somewhat surprised to notice that this kind of labels, which are superior to any other, for retaining the names of plants, is so little used by nurserymen and gardeners. Upwards of a year since, we first tried the experiment of marking with them; and labeled several pots of elrysanthemums, which have been exposed to the weather at all times, summer and winter; the writing is at this time in no way defaced, and the names may be as quickly and as easily ascertained, as they could when first written. We have no doubt but they will remain as intelligible for many years. Common wood labels, which are in general use, would have rotted off, by this time, or become so decayed upon the part beneath the soil, that they would be in danger of being broken off, and thus wholly lost. When it is considered how little the former cost, and the certainty of their retaining the names for an indefinite space of time, we hope that cultivators will bring them into general use. Nothing is so important to the nurseryman, both to insure credit for his establishment, and reputation to himself, as the sending abroad trees, shrubs, or plants, which are truly marked. But as is too frequently the case, this is little attended to, or if done, it is with a label which either will not retain the name, for any time, or with one on which it can never be intelligibly wrote. English cultivators have adopted various modes of marking plants, but, in our opinion, none of them are at all to be compared with that of writing upon zinc. These labels can be as easily made fast to a tree, by winding one end loosely round a branch, as they can be put into a pot; and they will not need renewing for many years. We have satisfied ourselves, of their superiority to any others, and we hope, for the correctness of names of plants, which is very important, that they will now be generally adopted.—*Ib.*

White corollæd var. of Rhododendron.—Your correspondent, A. J. D., in your last number (p. 99), speaks of "large plants of the erimson and white corollæd *Rhododendron arboreum*," which will be in flower this spring, in the collection belonging to J. W. Knevels, Esq., at Newburgh, N. Y. I was not aware that specimens of plants of the white variety of the true *arboreum*, strong enough to flower, were in any collection in this country; as it flowered for the first time in England, in 1833. Does not

your correspondent have reference to the *Rhododéndron álbum Pursh* which is a native?—*Yours, An Amateur.—Boston, March, 1836.*

Ribes Sanguineum.—This splendid shrub, first introduced into England by the late Mr. Douglas, should be in every garden or shrubbery. Its beautiful crimson blossoms, which are produced in numerous large racemes, have a gorgeous appearance. Do induce every person to possess a plant, who can find room to put one in his garden.—*lb.*

Forced Peaches.—In the green-house attached to the garden of Dr. Webster, Cambridge, are several trees trained on the back wall, which have now fruit on of the size of walnuts. Considering the severity of the season, this is remarkably early.—*Conds.*

The edible rooted Oxalis, (Oxalis crenàta). We hope experiments will be made in the cultivation of this promising tuber, in all the different sections of the Union. In England and Germany, although it does not appear in all cases to realize the high expectations formed in relation to it on its first introduction, yet in many cases, common crops have been produced, fully attesting the prolific quality of the plant. It was, we believe, introduced into England by Douglas, from S. America, and we conceive that the temperature of our western hemisphere, in the same isothermal parallels, will be more congenial to it, than that of the eastern. It is highly probable that the desideratum in the ripening of the tubers, is a long dry autumn, which is to be found in our climate, rather than the North of Europe. In many districts it may become a very valuable addition to the list of culinary vegetables, and resembling as it does, the potato in flavor, may yet rival that invaluable root in utility. In Loudon's Mag., we observe a notice of a single tuber, scarcely an ounce in weight, which yielded ninety tubers at a crop, weighing nearly 4 lbs. Still more extraordinary is the following account, which we extract from a French periodical. "A tuber of *oxalis crenata*, weighing only 28 grains, was planted on the 7th of April, in a rich old cucumber-bed in a garden at Plymouth. Five weeks after, two offsets were detached from the parent root, and replanted separately. The parent plant acquired an astonishing vigor spreading itself rapidly over a space more than 3 feet in circumference." On gathering the crop, which was found to be of delicious flavor, the following was the result:—

Production of the parent plant, 407 tubers, weighing 7 lbs. 8 oz.

"	of the two offsets,	198	"	"	3	"	8
		Total,	604	"	"	11	lbs.

"This," as the editor observes, "is almost without a parallel in the annals of horticulture."* The only notice we have seen of the culture of the *edible rooted oxalis*, in the United States, is given by your Philadelphia correspondent, (p. 76) where it is stated that a single root had produced, during the past season, two quarts, and another a half peck of tubers of good flavor. The leaves of the *Oxalis crenàta* are, like many other species of that genus, produced in threes, and the plant is, during the summer, covered with a profusion of bright yellow flowers. As the tuber can now doubtless be procured at the principal seed-stores, we would recommend their distribution by the different Horticultural Societies in various parts of the country, and communication to the public, of the results of their cultivation.

The Mexican Quinoa, (Chenopodium Quinoa). A few seeds of this new esculent plant, came into our hands, but had probably lost their vital principle, as we could not induce them to vegetate. It is an *annual*, and not only bears great crops of seeds, which are much used in Mexico, in the same manner as rice, and as an ingredient in soups and broths, but affords a great quantity of succulent leaves, excellent when eaten as

spinach. Dombey, the botanical traveller, mentions that the grains are in universal use throughout Peru. They are much more easily prepared for food than rice, and, judging from a few experiments lately made in Europe, can be grown in a much shorter time than rye, wheat or barley. There can be no reason why this plant should not succeed admirably in the Middle States.

The Bread-root of the western Indians (Psoralea esculenta). Pursh, who gave the first description of this plant, furnished also the often quoted information in relation to it, that it was "a staple article of diet among the western Indians." The plant does not appear to be known to botanists east of the Alleghanies, except as a dried specimen in their herbaria. Some of your correspondents in the west, would confer a favor by sending seeds or roots to the Atlantic States, where they could receive a fair trial in our gardens.*—*A. J. Downing, Botanic Garden and Nursery, Newburgh, N. Y.—Feb. 1836.*

Monograph of the North American Cyperaceæ.—We have been gratified with a sight of the proof sheets of a monograph of this extensive order of plants, by Dr. Torrey, now publishing in the 3d volume of the Annals of the Lyceum of Natural History, N. Y. It is remarkably complete; Professor Torrey (with Dr. Gray, whose monograph of Rhynchospora has recently been published in the Annals,) having devoted a great deal of study and research to this extensive group of vegetation. The generic and specific descriptions, in many instances entirely new, and in all cases thoroughly revised, evince the quantity of labor which has been bestowed upon it; and the *observations* which follow the copious list of localities in almost every species, are characterized by that acuteness of investigation which has contributed to give to Dr. Torrey so distinguished a botanical reputation both in Europe and America.—*A. J. D.*

Transplanting Evergreen Trees.—There is but one period, in this climate, when the removing of evergreens from their *native situations* can be attended with certain success. It is that season when the buds are distinctly swollen, and the whole tree is full of nourishing juices. This may happen at various times in different localities, and with different species, but generally takes place in the Middle and Eastern States, from the 1st of April to the 10th May. The *spongioles* and small fibres of evergreen trees are much more susceptible to injury from the action of drought than those of deciduous trees, and they should by all means, if possible, be preserved moist until replanted. Many persons err, by following the rules laid down in European publications, laudatory of late summer and even winter planting, and find, to their mortification, that they are not adapted to our seasons. The early and copious autumn rains, which make August a favorite month for this operation in many parts of England, are often protracted to too late a period here, to be of any service in the production of fresh roots, and the hot sun, and dry soil extinguish the last remnant of life in the withering trunk. Winter transplanting, though useless if practised in the ordinary way, may be carried on with great success if the trees are taken up with balls of frozen earth. With holes previously prepared, and a strong drag-sled for transportation, evergreen trees of very large size may be removed with astonishing success: and a beautiful effect may be produced almost immediately. The success of all experiments in transplanting, and more especially with large individuals, is wonderfully insured by depositing upon the surface of the soil which covers the roots, a layer of a few inches in depth, of any old litter, mulch or coarse vegetable substance, which will preserve a moisture in the soil, and prevent the injurious

* Prof. Short, of Lexington, Kentucky, will, if this note should meet his eye, oblige us by any information, respecting it, which may be in his possession.—*A. J. D.*

effects of the drying winds and hot sun upon the mould where the enfeebled rootlets are endeavoring to re-establish themselves.—*A. J. D.*

Flowering of Cycas revoluta.—There is a noble specimen of the Japanese sago, (*Cycas revoluta*), now in a state of inflorescence in the rich exotic collection of J. W. Knevels, Esq., Newburgh, N. Y. The trunk (which in none of the Cycadaceæ attains any great altitude) is about three feet six inches in height, nearly the same in circumference, and has the aged and venerable appearance of a century's growth. It is crowned by a beautiful tuft of the deep green pinnated fronds. *Cycas revoluta* belongs to the Dicotyledon Polyandria, of Linnaeus, and the present plant is a female. The inflorescence exhibits itself in the form of a globose cluster, about the size of a man's head, of brownish metamorphosed leaves, on the sides of which are arranged the embryo drupes, crowned each with a single stigma. The appearance of the plant in blossom is highly interesting to the botanist, and striking to a general observer, though there are no gaudy colored petals to arrest the eye. This specimen is believed to be about forty years of age, and is probably the first female plant that has produced flowers in the United States.—*A. J. D.*

The Season in Georgia.—The following extract is from a letter from a correspondent in Georgia, dated March 7th, 1836. It will be seen that the severity of the winter has not been confined to New England, alone, but has extended throughout the country:

"The season with us is backward, but promises well as yet for fruit. Peach buds scarcely begin to show red. *Gladiolus Watsonius*, (new with me) has flowered finely, and I like it much: *G. lineatus* (?) and *undulatus*, are coming on strong. *Watsonia aletrioidea*, is in bud; *W. marginata* and *Meriana*, will soon be so. *Sparaxis grandiflora*, two bulbs out of twenty, from seed sown about fourteen months ago, are going to flower in a few days; *S. tricolor* is weak. *Ferraria undulata*, and *Hypoxis stellata*, are showing buds."

Tigridia pavonia, in the climate of Georgia, flowers abundantly from new offsets nearly all summer and autumn.—*Conds.*

Rhododendron nudiflora *Azalea nudiflora* L.—This elegant species, which grows in large quantities near Worcester, and also near Keene, N. H., should be introduced into every garden. Its vivid brilliancy cannot be appreciated unless seen in its native situations, especially on thin sandy soils which border a deep growth of wood, or rocky banks of our rivers. Near its more lofty companion, the gloomy *Kalmia latifolia*, we scarcely know of the two, which excites the most admiration. We have seen it oftentimes growing in this manner on the high precipitous and picturesque banks of the noble Hudson, contributing its humble beauty to the united, unsurpassed loveliness of the scene. Transferred to our gardens, and planted in large clumps, it loses none of its attraction, but gives additional richness to the surrounding shrubs. *R. viscosa*, common in the vicinity, if planted in masses, has also a beautiful appearance.—*Yours, R.*

Pennsylvania Horticultural Society.—At the meeting of the Society on Monday, the 15th inst., the premium, for the best variety of vegetables, viz., asparagus, seakale and lettuce, was awarded to Wm. Chalmers, gardener to Mrs. Stott. Mr. Chalmers also obtained the premium for the best bouquet. Mr. Engleman exhibited lettuce and excellent scarlet radishes. Horace Binney, Esq., was elected president, instead of Geo. Voux, Esq., deceased.—*Yours, A. B.*—*Philadelphia, Feb. 16, 1836.*

Lemon Hill, the residence of Henry Pratt, Esq., was sold yesterday for the handsome sum of \$225,000,—the very superb collection of plants included. They will be offered at public sale in May next.—*ib.*

New Seedling variety of the Mimulus.—A very beautiful seedling *mimulus*, much resembling *M. Smithii*, has been raised by Mr. W. Car-

ter, of the Botanic Gardens, Cambridge. It has a very large flower, with two dark spots, in the place of one in the *Smithii*. It is stated to be very beautiful.—*Conds.*

Noisette rose Lamarque.—This most splendid variety is now in full bloom in the unique collection of plants of Mr. Sweetser, Cambridgeport. It is a standard plant, budded four or five feet high, and has expanded four or five of its yellowish white blossoms, measuring four or five inches in diameter. This variety should be in every garden. It is of vigorous growth.—*Id.*

ART. IV. Massachusetts Horticultural Society.

Saturday, February 27th.—Exhibited. From M. P. Wilder, the following species and varieties of the camellia:—*reticulata*, *maliflora* (*Sasanqua* Thun. var. *plena rubra*) *eximia*, *alba plena*, *Chandleri*, *myrtifolia*, *coccinea*, *pæoniæflora rosea*, *variegata*, *conchiflora*, *splendens*, *Colvilli*, *rosacæa*, *Dorséttii* and *corallina*? (*florida*); the four latter were exhibited for the first time; also *Pæonia Moutan* var. *Banksæa*.

March 5th.—Exhibited. From Messrs. Hovey, several species and varieties of camellias:—*elegans*, *variegata*, *eximia* (of the French), *corallina*, *splendens*, *insignis*, *alba plena*, *imperatrice du Brésil*, *anemoneflora*, *venosa*, *ignescens*, and a variety unknown; *venosa* and *ignescens* were exhibited for the first time. From S. Sweetser, a bouquet of flowers, containing *Rhododendron arboreum* var. *hybridum*, *R. indicum* var. *hybrida* (*Azalea indica* var.) *Melianthus major*, *Clarkia elegans*, *Cyclamen persicum*, *Tris chinensis*, *oxalises*, *crimson nasturtium*, *yellow tea roses*, &c., &c.

Read.—Letters from A. Walsh, Esq., Lansingburgh, N. Y., and from Wm. Kenrick, Newton.

Presents.—The New American Orchardist, and the Silk-Grower's Guide, from Wm. Kenrick.

March 12th.—Exhibited. From the Messrs. Winship, a great variety of flowers, among which were *Rhododendron ledifolia*, *R. indicum phænicea*, and *hybrida*; *Erica verticillata*, and *herbacea*; *Eupacris grandiflora*, *Acacia armata* and *longiflora*, *Melianthus major*, *Calceolæa scabiosæfolia*, *Eupatorium odoratum*, *Verbena Aubletia*, *Bryophyllum calycinum*, *mimulus*, *geraniums*, *oxalises*, *stocks*, *roses*, *petunias*, *salvias*, *canary asters*, *Calla æthiopica*, *Asclèpias curassavica*, &c., &c. From T. Mason, *Rhododendron indicum*, *Acacia longifolia*, *Camellia maliflora*, *C. j. pomponia*, and a seedling; *roses*, *geraniums*, *schizanthus*, *stocks*, *primroses*, &c.

Read.—A letter from the Messrs. Hovey.

Presents.—The American Gardener's Magazine, Vol. I, and three Nos. of Vol. II, from the Messrs. Hovey.

ART. V. Quincy Market.

<i>Roots, Tubers, &c.</i>		From	To			From	To
		\$ cts.	\$ cts.			\$ cts.	\$ cts.
Potatoes :							
Common, {	per barrel,	1 00	1 25	West India, per cwt.		4 00	
	per bushel,	37½	50	Common crookneck, per cwt. ...		4 00	5 00
Chenangoes, {	per barrel,	1 25	1 50	Lima, per cwt.		4 00	
	per bushel,	50	62½	Palermo Squash, per pound,		6	
Eastport, {	per barrel,	2 00	2 50	Pumpkins, each,		12½	25
	per bushel,	1 00					
St. Helena, {	per barrel,	1 50	1 75	<i>Pot and Sweet Herbs.</i>			
	per bushel,	62½	75	Parsley, per half peck,		50	75
Turnips :				Sage, per pound,		17	20
Common, {	per barrel,	50	75	Marjoram, per bunch,		6	12
	per bushel,	25	37½	Savory,		6	12
Yellow French, per barrel, ...		1 00	1 25	Spearmint,		6	
Onions :							
Common, {	per barrel,	2 25	2 50	<i>Fruits.</i>			
	per bushel,	75	1 00	Apples, dessert :			
	per bunch,	3	4	Common, {	per barrel,	1 75	2 00
White, per bunch,		6			per bushel,	62½	75
Beets, per bushel,		50	75		per barrel,	2 00	2 12
Carrots, per bushel,		50	75	Baldwin, {	per bushel,	1 00	1 12
Parsnips, per bushel,		75			per barrel,	1 75	2 00
Salsify, per bunch,		12½		Russets, {	per barrel,	87	1 00
Horseradish, per pound,		6	10		per bushel,		
Shallots, per pound,		20		Pears :			
Garlic, per pound,		14		St. Germain, per dozen,		none.	
<i>Cabbages, Salads, &c.</i>				Winter, {	per barrel,	4 50	5 00
Cabbages : per dozen.					per bushel,	2 00	
Savoys,		75	1 00	Quinces, per bushel,		none.	
Drumhead,		75	1 00	Pine Apples,		37½	50
Red,		75	1 00	Grapes :			
Brocoli, each,		none.		Malaga, per pound,		37½	50
Cauliflower, each,		"		Cranberries, per barrel,		6 00	8 00
Celery, per root,		10	25		per bushel,	2 50	3 00
Lettuce, per head,		6	10	Oranges, {	per box,	2 25	3 75
Radishes, per bunch,		8	12½		per dozen,	25	37½
Spinach, per peck,		25		Lemons, {	per box,	2 25	2 50
Dandelions, per half peck,		50			per hundred,	1 00	1 25
<i>Squashes and Pumpkins.</i>					per barrel,	6 50	7 00
Canada crookneck, per cwt., ...		none.		Chestnuts, {	per bushel,	2 00	2 50
					per barrel,	4 00	4 50
				Walnuts, {	per barrel,	1 75	2 00
					per bushel,	12	14
				Almonds, per pound,		4	6
				Filberts, per pound,			

REMARKS.—Since our last, sales have been more brisk, although the weather has continued severe, nearly up to this time. Some potatoes have arrived from the Eastward; Nova Scotias are very plenty; Eastport have advanced in price, and there are few remaining on hand. Turnips are plenty and good. Loose onions are rather scarce, and prices have advanced by the barrel; those in bunches are plentifully abundant, and are sold remarkably low. Of cabbages there is a good supply for the season. Brocoli and cauliflowers are all gone. No celery remains on hand. Lettuce is brought in of finer quality, and in tolerable plenty for the earliness of the season. Radishes are also abundant. Spinach comes to hand in large quantities. A few dandelions, the first this year, were brought in this week; they were not, however, collected from fields, but were cut from cultivated plants; we have often wondered why they were not oftener grown in gardens; they are much superior to those culled from pastures. Canada crookneck squashes are about gone, and of the common crookneck, there are very few remaining on hand. West India are tolerably plenty, several hundred having lately arrived. The stock of apples, in general, is yet abundant, though prices have advanced on some kinds; this is, however, for those which have been picked over, and of superior quality; Baldwins are quite scarce; russets have declined in price. Pine apples are scarce. Oranges and lemons

are very plenty; several cargoes have lately arrived. Cranberries are considerably lower in price. Good chestnuts are in demand, but are scarce; those of poor quality are plenty; walnuts remain the same.—*Yours, M. T.—Boston, March 22d, 1836.*

ART. VI. *Obituary Notice.*

DIED, in this city, on the morning of the 20th of March, *George C. Barrett*, at the age of 27 years, proprietor of the New England Farmer and seedstore. Mr. Barrett was an industrious and enterprising citizen, and as such, carried on an extensive business in seeds. His loss will be deeply felt by those within the circle of his acquaintance.

ART. VII. *Meteorological Notices.*

FOR FEBRUARY.

THE severity of the weather, through the month of February, was almost unprecedented. Considerable snow fell, which, with that during the previous winter months, was several feet in depth. The mercury fell below zero in the morning for *ten days* in succession, the first part of the month; and, about the middle, it fell as low, for eight days more. The winds were prevalent from the north-west. More than half of the month was cloudy, and extremely unpleasant.

THERMOMETER.—Mean temperature, $17^{\circ} 12'$; highest, 44° ; lowest, 11° below zero.

WINDS.—N., five days—S. E., one—S. W., six—W., five—N. W., twelve days.

Force of the Wind.—Brisk, eight days; light, twenty-one days.

Character of the Weather. FINE, nine days; FAIR, five days; CLOUDY, fifteen days.

Rainy, four days; Snowy, seven days.

MONTHLY CALENDAR
OF
HORTICULTURE AND FLORICULTURE,
FOR APRIL.

FRUIT DEPARTMENT.

Grape Vines, in the green-house or grapery, will now be opening their blossoms: raise the temperature a little, and admit but a small portion of air, till the fruit is set. After that, let the vines be syringed once or twice a week, and give more air. For further directions, see Vol. I, pp. 79, 119, 159, &c.

Grape Eyes may still be put in hot-beds: those which were started last month, will now be several inches high: keep up the temperature of the bed by linings, and give them occasionally a little liquid manure. See Vol. I, p. 48.

Strawberry Beds should be uncovered this month, and, as soon as they begin to grow, let them be top dressed with a little old rotten manure. New beds should be made this month. See page 50.

Pear and Apple trees should be grafted this month.

Gooseberry and Currant Bushes should be pruned, if not yet done. New plantations should also be made.

Raspberry Bushes should be tied up to stakes, and new plantations made, if wanted.

FLOWER DEPARTMENT.

Hyacinth and Tulip beds should be uncovered early this month. The surface should be lightly stirred with a trowell.

Ranunculuses should, if dry weather, be duly watered, and, as their flower stems advance, they should be shaded from the sun.

Tender Annuals should be immediately sown in hot-beds. Hardy and half hardy should be sown in the open ground.

Salvia Splendens. Cuttings of this fine plant should be put in at this season.

Calceolarias and Schizanthuses, in the green-house, will again require re-potting.

Geraniums will now soon be in full bloom. Give them plenty of water.

Camellias will still require regular waterings, as they have not yet completed their growth. Continue to repot all such as are not in good health.

Rose Bushes should be now pruned, and all the transplanting that is to be done should be finished this month. For a good selection, see Vol. I, p. 290.

Dahlias should still be propagated, if cuttings of a great number are wanted to decorate the borders: if only a few of each sort are wanted, the roots may be divided, leaving a good shoot to each tuber.

Tiger Flowers, Jacobean Lilies, Tuberoses, and Gladiolus, should be set in pots, and placed in the hot-bed. See Vol. I.

Perennials should be transplanted towards the latter part of the month.

VEGETABLE DEPARTMENT.

Asparagus Beds should have their surface forked over carefully, and leveled off even with the rake. Preparations should be made, if it is intended to plant new beds.

Rhubarb Roots should be transplanted this month. For particular directions, see Vol. I.

Cucumbers in hot-beds will now be showing blossoms. Give plenty of air and water, and keep up the heat by linings.

Peas should be sown immediately, in warm situations.

THE
AMERICAN
GARDENER'S MAGAZINE.
MAY, 1836.

ORIGINAL COMMUNICATIONS.

ART. I. *Observations on the Culture of the Plum, with some Remarks upon the Insects infesting that Tree.* By Messrs. C. & A. J. DOWNING, Botanic Garden and Nursery, Newburgh, N. Y.

THE *plum* in some of its species, as the beach plum. (*Prunus littoralis*) and the Chicasaw plum (*P. chicasa*) is indigenous to many parts of the United States, but the fine cultivated varieties, now so abundant in our gardens, have been produced from an eastern species (*Prunus doméstica*), probably first introduced into Europe from Syria.

The cultivation of the plum in the Middle and Eastern States is exceedingly easy. The soil best adapted to that purpose is a moderately strong, light and dry loam; moist soils predisposing the tree to disease, and rendering it unfruitful. Gravelly and stony soils, though generally considered rather unsuitable, will be found excellent if the trees are planted in orchards, and receive that care in cultivation, peculiarly proper for such situations.

The plum not requiring walls in this climate, but growing with great luxuriance as an open standard tree, needs but little skill in pruning; the head of the tree should by no means, however, be permitted to become crowded with branches, but by judicious trimming, be kept open to the genial influence of the sun and air. Pruning, in the plum, as in all other stone fruits, should be performed while the branches are small, as the exudation of gum is induced by lopping large limbs, and the wounds heal with difficulty. To those persons who feel lost in the labyrinth of a modern catalogue of fruits, the following selection of plums, of first rate excellence, for a small garden, may not be unacceptable.

Yellow fruited.
 Washington,
 Coe's Golden drop,
 Drap d'or,
 Yellow Gage,

Green fruited.
 Green Gage,
 Imperial do.
 Flushing do.
 Luscomb's Nonsuch.

Blue or Purple fruited.

Reine Claude Violette, or
 Blue Imperatrice,
 Kirk's,
 Imperial Diadem,

Purple Gage,
 Nectarine,
 Red Gage.

The Reine Claude Violette, or purple gage, is one of the most delicious of plums. The Blue Imperatrice is excellent, and keeps a long time after ripening. Coe's Golden drop and the Washington are very large and luscious fruit; and the Nectarine and Kirk's plum, are very beautiful, of large size, and fine flavored. The Azure Hative may, in addition to the above, be recommended as a very early variety, and the White Magnum Bonum, or egg plum, as being suitable for preserving.

Diseases of the Plum. The plum tree is subject in this country, in many districts, to the attacks of two or three insects which commit great havoc in their respective methods, and which, owing to the culpable ignorance or negligence of cultivators, are permitted to increase and disseminate themselves, *ad libitum*. The first and most troublesome of these visitors, is the *Curculio nemuphar* of Herbot.* It is a small winged insect, scarcely a fourth of an inch in length, furnished with a sharp rostrum or bill, with which it pierces the embryo fruit as soon as it is formed in the expanded blossom. Though the insect itself is too inconspicuous to attract the eye of a careless observer, amidst the countless myriads of ephemeral winged creations of a spring day, yet the watchful horticulturist may discover it in great numbers flitting about in the trees, while yet laden with blossoms, and puncturing the newly formed fruit to deposit the egg which is to continue its race. These punctures may first be discovered when the fruit begins to swell, and when it has attained half or a fourth of its size; they are very distinct to the eye, remaining in the form of a crescent-shaped scar, upon the surface of the green fruit. The egg in the mean time hatches, and the larvæ silently works its way towards the stem of the fruit, which, as soon as it has reached that point, falls from the tree. The whole crop is in many cases, where the careless cultivator has suffered the annual increase of the *curculio*, drops in this manner prematurely from the tree, to the great mortification and astonishment of those persons unfamiliar with the habits of the insect race, who can see no cause of such a destruction of fruit. When the fruit has fallen to the ground, the grub or larvæ, obeying the instinct of nature, after a short time, leaves the now use-

* *Rynchænus cerasi* Peck.

less and decayed plum, and finding its way into the soil, remains there at some depth below the surface, to come forth in the succeeding spring, in its winged state, to go through its little round of existence again.

Countless remedies have been proposed for the mitigation of the evil, caused by the *curculio*, which are directed to the destruction of the insect in a winged state, when engaged in perpetrating the mischief, whilst the tree is yet in bloom: but there is but one easy, certain, and efficacious method of putting a stop to its ravages, viz., by destroying it in the larvæ or grub state after it has fallen from the tree, and before it has left the fruit. In plum orchards nothing can be more easily accomplished. The cultivator has only to turn in his *swine*, and allow them to *devour the fruit daily as it falls from the tree, and every insect will perish*. This has been tested repeatedly, and with uniform success. The *curculio*, though a winged insect, is scarcely a migratory one, seldom leaving the neighborhood of the tree under which it emerged from the soil, and it has been found that, of two trees standing in adjoining gardens, one of them was attacked, and the fruit destroyed, whilst the neighboring one, when pains had been taken to destroy the insects, remained laden with a beautiful crop. In small gardens, therefore, when the number of trees is limited, it would well repay the trouble of gathering up and destroying the green fruit, as in a short time, the whole brood would be exterminated. It should be observed that when the soil has been trodden hard, when it has been paved underneath the branches, or in situations where the tree has inclined over a sheet of water, the larvæ of the *curculio*, not being able to find its way readily into the soil, perishes, and the trees bear abundantly. This is obviously the reason why the trees in the hard trodden or paved yards of cities, often yield such surprising crops—and the amateur horticulturist may draw a useful lesson from this fact.

Another most troublesome malady to which the plum is liable in some parts of the country, is commonly known by the name of the *knots*. It exhibits itself in the form of rough black *excrescences* upon the branches, of various sizes, from the scarcely perceptible swelling, to bunches of the size of the fist. If permitted to extend itself, it soon covers the whole tree, apparently disseminating its poisonous influence by the medium of the sap through the entire individual. On dissecting an infected branch, the wood and bark, in the discarded part, is found black and dry, and the whole vegetable substance is changed in appearance; if long diseased, the conducting vessels are dead and dried up, and this malignant influence may be seen extending itself upwards, first visible in the pith, and afterwards in the heart-wood, until the whole branch is destroyed. Upon opening these protuberances carefully, at a certain season of the year, the close observer will detect the larvæ of an insect of

the weevil family, and which Professor Peck believes to be the same insect (the *curculio*) *Rhynchænus cerasi*, which attacks the fruit—he having reared it from the grub that inhabits the excrescences of the cherry tree. But we are inclined to believe this insect to be another and a totally distinct species, and shall endeavor, the present season, by rearing and placing it in the hands of some skilful entomologist, to set the matter at rest. Practically, however, this knowledge is, perhaps, of no great consequence, as it is known that the larvæ leave the diseased branches in July, and a knowledge of this single fact should be sufficient to impress upon the horticulturist the necessity of cutting off and extirpating (burning is the best method), entirely, all those branches which show the least symptoms of disease, before that month commences. In this way the insect may be wonderfully diminished in numbers, and probably entirely subdued. The branches of some kinds of plum (fortunately the least valuable, as the horse plum and damson) seem to be sought in preference, by the insect, when depositing its egg; but if its ravages are permitted to extend unchecked, the other and more precious varieties will also fall a prey. To so great an extent did the damage caused by this single insect spread, about thirty years since, in some parts of the State of New York, that scarcely a plum tree survived the disease, owing to the ignorance of its habits prevalent among the cultivators at that time.

There is but one more insect which is generally destructive to the plum tree in America—the *borer* (*Agleria exilis*, Say), which attacks also the peach tree, and other stone fruits, just below the surface of the ground. The eggs of this insect are deposited in the bark of the tree, close to the earth, and the grub, upon hatching, penetrates further down, and bores its way around the trunk, and if undisturbed, completely destroys the albumen, or young wood, and ultimately causing the death of the tree. As these larvæ are always found in a particular place, technically called the *neck* of the tree, just below the surface of the soil, the proprietors of extensive peach orchards have found it the most effective and speedy method of extermination, to examine their trees every fall, removing the earth two or three inches deep, and upon the appearance of gum (a sure symptom), searching out and destroying the larvæ, with a knife for that purpose. A laborer, with trifling practice, will examine a great number of trees in a day, and with this slight annual care, whole orchards are, so far as the *borer* is concerned, preserved in most vigorous health. From successful practice, we cannot but think this the most unfailing method with the plum also. Boiling hot water, poured around the trunk of the tree, will, without any injury, in many cases, destroy the larvæ; and soap-suds have been recommended for the same purpose. The public prints abound, lately, with accounts of the efficacy of a deposit of coal ashes around the trunk and roots of the tree, but we need some

further proofs of the value of this remedy, before placing much reliance in its virtue. Yours, C. & A. J. DOWNING.

Newburgh, N. Y., April, 1836.

ART. II. *Notice of some of the Epiphytæ, and Parasitic Plants of the United States, with Remarks on their Physiological Characters.* By JOHN LEWIS RUSSELL, Prof. Bot. etc., to the Mass. Hort. Soc.

ALTHOUGH the tropics are peculiarly rich in these curious vegetables, which luxuriate in the dark and rapidly growing and decaying forests, yet even our more northern clime, can furnish a few no less interesting to the lover of science, though far less attractive to the artificial taste of the florist. Several genera may be found in the New England States, which, independent of their parasitic character, are remarkable for the singularity of their form. In your summer ramble through the dense and damp woods, you may perchance meet with a curious cluster of brown, or yellowish, and extremely succulent, vegetables, covered with a pubescence, and instead of leaves, invested with minute scales. Should your curiosity prompt you to stoop and examine the anomalous and fungous-looking body, you will discover, gentle reader! the curious and beautiful native epiphytic *Orobánche*, whose minute examination may repay your attention. This genus forms the type of the natural order of *Orobáncheæ* of Jussieu and of Lindley, and under this same order is its cogenus *Epiphagus* of Nuttall; which being a parasite on the roots of the beech (*Fagus*) has received from him its beautifully appropriate name.* One species, the "*E. americanus*," is said to be found in Maine, but not in this vicinity.

Perhaps not far distant, and in the same ramble, you will notice the remarkable, and ivory *Monétropa*, in which nature seems to have forgotten her usual livery of green to invest one of her fairy and delicate productions in a vesture of entire, unsullied purity. By a sort of desecration, it has received, in common language, the trivial name of that instrument, which affords an exhilarating solace to many a devotee to the "fragrant weed." But however

* We give the word as found in his second edition of "Introduction to Botany," and as in accordance with our own ideas of its derivation, *ἐπι* and *φαγῶδ*. Beck, in his "Botany of the Northern and Middle States," uses the genus, *Epiphagus*, from *φαγῶδ*. Doric.—J. L. R.

apt its resemblance or name, it may be a question, whether the simple taste which dictates the admiration of the flower, would not have proved as beneficial to the general happiness, as that more luxurious taste which invented both the name and its origin. Another cogenus, and you have *Hypómithys*, of which "*H. lanuginosa*" is by no means rare in the neighborhood of Boston, and is a distinct parasite, affixing its densely crowded stems to the roots of trees.

And have you not often observed the golden and glittering thread-like branches of the twining *Cuscuta*, climbing with an aspiring habit, not unlike its more gigantic, though not parasitic sister vegetables, up the slender stem of some delicate grass or plant herb; by the rapidity of its growth, and predatory disposition, draining the very vital energy from its supporter, till overclimbing, and overreaching, it still progresses onward, over the topmost foliage, and lays hold of whatever next presents itself, till all are involved in inextricable confusion; and then, as if in triumph at the mischief it has occasioned, cover its leafless, voluble stems, with a mass of clustered flowers?

The first growth of the *Cuscuta* exhibits an anomaly of a vascular plant with perfect seeds, germinating without any cotyledon. A few other plants arranged under the *exogénæ* on account of their organization, are, in common with this, in fact, *acotyledonous*. The absence of cotyledons, has led to the theory of their presence in a consolidated, and consequently unfolded or undeveloped condition.

Throughout the Western States, you will find, particularly upon the branches of the elm, the sempervirent mistletoe (*Viscum verticillatum*), whose parasitic and epiphytic character, and supposed virtues so early attracted notice. It is one of the few plants connected with the superstitions of a barbarous age, and from its rare occurrence on the oak, was estimated, when discovered in that situation, as peculiarly sacred. But like many other things that have nothing but antiquity to recommend them, its fictitious good qualities are overlooked, while its more prominent character of disfiguring the branches of its otherwise graceful and elegant supporter, are only noticeable.

Farther south, in Florida, and on the sea coast of Georgia and Carolina, we meet with a species of the true and genuine epiphyte, in the "*Epidéndrum conópseum*." This is the only representative in the United States, of that curious genus. It has been found growing on the trunks of the noble "*Magnolia grandiflora*," both by Nuttall and Elliott, and by the latter, observed also on several species of oak.

In the last number of the American Gardener's Magazine, for April, it is incautiously stated, speaking of this plant, that it is "interesting as the only parasitical plant yet discovered in the United

States." (p. 144, Vol. II.) It is true that it is the only epiphyte connected with the numerous congeners and co-species so common in other and tropical climates. That we have other parasitic epiphytes, has been already shown.

An almost innumerable family of less perfectly organized vegetable forms, which are to a certain extent parasitic, is composed of the Lichenes, Fungi, Hepaticæ, etc., but these deriving no necessary nutriment from the vegetables on which they are found, and growing also on the surface of rocks and of other bodies, are termed false parasites. None the less important are they, however, in the great economy of nature, which renders each minute particle of organized matter a great and necessary agent in her operations.

Yours,

JOHN LEWIS RUSSELL.

South Hingham, April, 1836.



ART. III. *On the Cultivation of some of the most select Biennial and Perennial Plants, with some Remarks upon their Beauty.* By S. WALKER.

(Continued from p. 128.)

Anemone hepática L.; The Hepatica.—"This flower lies a year complete, with all its parts, within the bud, and is one of the most eminent beauties of the spring. The flowers appear in March; and the double sorts which have fairer and more durable flowers than the single ones, make a beautiful appearance upon the borders of the pleasure garden."—"There are many varieties of this species, as, 1, single and double blue. 2, single and double red, or peach colored. 3, single and double white. 4, single and double variegated red and white. 5, single and double violet-colored. 6, with striped leaves." This plant is found wild in Denmark, Sweden, Switzerland, France, Spain, Italy, and other parts of Europe; and thrives in a good rich loamy soil facing the east; cold does not injure them, and they do best, when only exposed to the morning sun. The double red and double blue, are to be found in some of the gardens in the vicinity of Boston. They are increased by parting their roots every third or fourth year, as soon as the flowers begin to fade. It is a perennial.

Antirrhinum majus; Great Rock Toad-flax, or Snap-dragon. "These flowers are many of them large and handsome, but some persons consider them coarse; which, indeed, is the case with

many of the most splendid flowers, as the hollyhock and the sun-flower. They are, however, very magnificent, particularly the great snap-dragon. The flowers of this species are red, white, purple, yellow, or a combination of any two of these colors." They love a dry soil, and as there is a very great variety of this plant, I would recommend the var. *pictum*, *coccinea*, and *spartium*. They are increased by cuttings planted in the summer months; and new varieties may be obtained from the seed;—the roots are biennial.

Aquilegia vulgaris; *Common Columbine*.—It is a perennial, and may be increased by dividing the roots. They vary much by culture, and are found of almost every color; "blue, white, red, purple, flesh-colored, chestnut-colored, and striped or variegated blue and purple, blue and white, and red and white." They will do well in almost any soil; two or three of the best varieties should be cultivated. I saw a very fine specimen of this flower, in the summer of 1835, at the garden of Mr. Jno. Richardson, of Dorchester.

Coreopsis;—it is called by gardeners, the *Tick-seeded Sun-flower*, the seed being like a tick or bug. There are many varieties of this plant. *C. lanceolata*, *spear-leaved Coreopsis*, is the most showy, and deserves a place in every garden. It is propagated by parting the root in the autumn, and loves a rich strong soil; it is a perennial.

Pulmonaria virginica; *Cowslips of Jerusalem*.—"In favorable seasons the flower-garden owes much of its gayety to this elegant plant, and at a time when ornament is most desirable." It generally blooms with us, early in May. It should be planted in a dry soil; the roots run deep in the ground, and would rot with much moisture. This is a perennial, and may be increased by dividing the roots. It loves a pure air, and if sheltered from cold winds, while in bloom, will amply repay the trouble. "The colors are many; not only on the same cluster, but on the individual blossom, appearing various shades of red and blue, and these shades continually changing. Drayton places this flower in such honorable company, as gives us good reason to believe that he held it in great esteem.

"Maids, get the choicest flowers, a garland, and entwine,
Nor pinks, nor pansies, let these want; be sure of cglantine,
See that there be store of lilies,
(Called of Shepard's daffodillies)
With roses damask, white, and red, the dearest flower-de-lis,
The cowslip of Jerusalem, and clove of Paradise."

Viola odorata; *Sweet Violet*.—"This favorite flower so universally esteemed for its fine odor, is a native of every part of Europe. There are the following varieties of the common violet; the single blue and white, the double blue and white, and the pale purple; all of which are generally preserved in gardens." The

double blue, and double white, are the most desirable. They are so fragrant, that a single blossom will perfume a very large room. They are perennial, and may be propagated by parting the roots in the spring or autumn; they love a bank facing the east, and shade after 10 o'clock A. M.

This flower has long been a favorite with the people of England; their poets have sung its praises. If we could touch the lyre, we would follow their example, but must be content to give one or two quotations. In describing a little woodland work of violets, Mr. Keats, has the following passage:

—————"where to pry aloof,
Atween the pillars of the sylvan roof,
Would be to find where violet beds were nestling,—
And where the bee with cowslip-bells was wrestling."

"Gay villagers, upon a morn of May,
When they have tired their gentle limbs with play,
And formed a snowy circle on the grass,
And placed in midst of all that lovely lass
Who is their queen;—with her fine head
Crowned with flowers, purple, white, and red;
For there the lily and the musk-rose, sighing,
Are emblems true of hapless lovers dying:
Between her breasts, that never yet felt trouble,
A bunch of violets, full-blown, and double,
Serenely sleep."

And, again, how beautiful is the following passage in the Winter's Tale:

—————"violets, dim,
But sweeter than the lids of Juno's eyes,
Or Cytherea's breath."

The tri-colored or pansy violet, has been the subject of a former communication; the reader is referred to page 17 of the first volume of this work for further particulars.

Delphinium chinense flore plèno; *Double flowering Chinese Larkspur*.—This plant must be placed at the head of all the herbaceous perennial flowers. It makes a most magnificent appearance, in the garden, from the middle of June, until it is cut down by the frost; a strong root will throw up from six to ten stalks, and, if grown in good strong loamy soil, will reach the height of from four to six feet; the flowers are of a fine azure blue color, and appear as if they were bronzed. It has no superior, and but few equals; it is a prince, full of beauty, grandeur, and magnificence. It may be propagated by parting the roots in the spring or autumn.

Yours,

Roxbury, April 13, 1836.

S. WALKER.

(To be continued.)

ART. IV. *On the Cultivation of several of the most beautiful Species and Varieties of Cactus and Cereus.* By a PRACTICAL GARDENER.

ALTHOUGH, in these two genera, we cannot boast of splendid and shining foliage, or even an elegant habit of growth, we may with justice be allowed to state that there are but few plants, furnished with these particular requisites, which can rival the well known night blooming cereus, (*Cereus grandiflorus*), in the delicacy and beauty of the flowers. The fragrance is also very agreeable to almost every person, judging from the propensity there is in every one, who visits this nocturnal bloomer, to smell of a flower the moment it makes its appearance. The flowers begin to open at sun set, and are in full bloom from ten o'clock at *night*, to two or three o'clock in the *morning*; and, at sun rise, they gradually close up, to expand no more. Color of the sepals an orange yellow—which contrasts beautifully with the snowy white corolla; size about *six inches* in diameter. Indigenous to Jamaica and Vera Cruz. The temperature most desirable to grow this singular plant in perfection, is from seventy to ninety degrees of heat; this may be one reason why we so rarely meet with a flourishing specimen. Through our summer months, placed under glass, we do not lack much of the specified warmth; therefore it is obvious enough that it is the treatment through the winter that gives the plant such an arid appearance. During this season the plant is generally placed in the hottest part of the green-house or stove, and the roots subjected to all the variations of an artificial temperature, with scarcely a spoonful of water, once a week, to feed it; the earth in the pot being completely baked and dried up; the whole plant sickens and not unfrequently perishes, or dies, at the surface of the pot; the top becomes a *parasite*, subsisting altogether on the atmosphere. This is called damping off; *moisture* being universally supposed to be the death of the plant, whereas, in fact, it might be termed, and very appropriately, drying off. That water is necessary for the well doing of every plant that strikes its roots deep in the soil or sand, (some of the species having been found growing in Mexico on a sand bed), no person will attempt to deny. A safe rule to go by, is, to endeavor to steer between the two extremes; and, in order to take the intermediate path, I shall, in this place, recommend a compost, that is composed of one half good fresh *earth*, half leaf soil, and a portion of sand, well mixed together, and the other half, pieces of broken flower pots, or, if those cannot be had, choose a soft burnt brick and pound it into quite small pieces, but not to *dust*; when this is done, mix it with the soil thoroughly; here you will have a compost one half broken pots or

bricks, and the other half a rich soil which has been seldom or ever used for these species of plants. The next thing is the draining of the pot, which is a very important point, and must not be neglected. Making use of a pot two or three sizes larger than the one the plant is growing in, supposing it is to be repotted, lay a piece of pot, or oyster shell over the hole, at the bottom, with the hollow side downwards, and fill up about one third of the pot with potsherds or bricks—not so small as that which was used to mix with the compost. The kind of soil here recommended, I have tried, and do not hesitate in advising those, who are partial to this genus of plants, to adopt the same practice, if they wish to excel in their cultivation. In the winter season, or when the plants are not growing, water sparingly; nevertheless a certain portion is indispensably necessary; in this the cultivator must be his own judge as no invariable rule can be given. With a drainage such as recommended, the water will pass through immediately—which should be kept in remembrance. This great flowering cereus has been cultivated in England upwards of one hundred years, and to all lovers of tropical plants, it still is, and always has been, a great favorite. When judiciously trained in a zigzag manner to a trellis, or a ladder made for the purpose, it makes a very beautiful appearance, and certainly has no very distant claim to one of the most prominent stands in the stove or green-house.

Yours, &c., A PRACTICAL GARDENER.

Cambridge, April, 1836.

ART. V. *Beautiful Plants growing wild in the Vicinity of Boston.*

By E. B. KENRICK, Watertown.

(Continued from p. 134.)

Rhodora.

Rhodora canadense L. Canadian Rhodora, False Honeysuckle. A small shrub, about two feet high, very beautiful flowers, which are seen before the leaves begin to expand. Leaves alternate, oval, hairy and glaucous or whitish beneath, and mostly not indented on the rim. The corolla consists of three unequal petals, the largest of which is broad, and is divided into three segments or lobes at the end, while the two other petals are equal, lance-formed, and obtuse. The flowers are in umbels or umbrella-shaped clusters, on the ends

of the twigs; and their color is a fine rich purple. This plant looks very much like an Azàlea.—Swamps, or low grounds. Not common; but grows in plenty in a swamp close by Adams' Row, at Newton.—Blossoms in May.—When transplanted, it should be set in peat, or bog earth, in the shade of taller plants.

Spiræ'a.

Spiræ'a salicifolia L. Willow-leaved Hardhack, Meadow Sweet. A shrub three or four feet high, with several slender, smooth, reddish stems, branching from one root. Leaves willowish, lance-formed, tapering at base, rather blunt pointed, smooth and thin, with sharp teeth pointing upward. Calyx with five segment. Corolla five-petaled. Flowers small, white, crowded into a terminal panicle or bunch, of a somewhat conical shape, composed of small flowering branches at the top of the stem, and from the shoulders of the upper leaves.—Meadows and pastures.—July, August.

Spiræ'a tomentosa L. Downy Spiræa, Hardhack. A very common, but beautiful, slender shrub, two or three feet in height. Leaves nearly oval, thick and tough, dark green above, whitish and very downy beneath. Calyx in five divisions. Corolla five-petaled. Flowers small, fine purple, growing at the end of the stem in a compound spike, about five inches long, shaped like the flame of a candle.—Low, or damp grounds.—July, August.

Staphylèa.

Staphylèa trifolia L. Bladder nut. A handsome shrub, from six to ten feet high, remarkable for its inflated, bladder-like capsules or seed cases. Leaves in threes, somewhat hairy; leaflets oval, notched, paler beneath, with a point long-drawn. Calyx five-parted, erect, tinged with red, its divisions oblong, bluntly tipped, its base contracted into a stalk that forms a joint with the flower stem. Petals five, white, inverted egg-shaped, obtuse, concave. Flowers in a short, nodding panicle or cluster, with branching stems. The capsule or bladder, has three cells, each of which, when the fruit is ripe, usually contains one, two, or three smooth, hard, small nuts.—Rocky hills; woods at Weston.—May, June.

Viburnum.

“The different species of *Viburnum* are fine flowering shrubs, and with the elder, which need not be described, constitute a principal ornament of our woods and thickets, during the first part of summer.”

This genus has a five-parted calyx, proceeding from the upper part of the germ; a corolla cleft into five segments; and a one-seeded berry. The reader will do well to keep in mind, that all our species of *Viburnum*, bear clusters in the form of a *cyme*, in which, as in common elder, the general flower stems radiate from one

centre, like the braces of a parasol, but are afterwards irregular in their subdivisions.

Viburnum acerifolium L. Maple-leaved Viburnum. A very delicate species, with a slender, flexible stem, from four to six feet high. The leaf strikingly resembles that of our common white maple. It is broad, more or less hollow or heart-shaped at base, divided into three suddenly pointed lobes, with large teeth; and is rendered very soft by minute down underneath. Flowers white, in a cymose cluster, with long peduncles or stems. Berries oval, flat, blackish, with a seed like those of a water-melon.—Rocky woods; Roxbury, Newton, &c.—June.

Viburnum dentatum L. Arrow Wood. A handsome species, eight feet high; remarkable for straight branches, and a leaf with very conspicuous, regular teeth. The leaves are orbicular egg-shaped, much indented on the edges, furrow plaited, and have hairs at the shoulders of the veins beneath. Flowers white, in cyme-shaped clusters. Berries blue, small, somewhat globular.—Swamps, moist woods, and hedges.—June.

Viburnum Lentago L. Sweet Viburnum. From eight to twelve feet in altitude, the branches, when full-grown, often forming a level top. Leaves three inches in length, egg-shaped, often a little cordate or heart-shaped, with a long, sudden, sharp point, and very small margined hook-teeth. The leaf stems have waved or curled membranes on their edges. Flowers white, crowded. Berries black, oval, sweetish, and pleasant-tasting.—South Boston, Cambridge, Newton.—June.

Viburnum nudum L. Naked Viburnum. From eight to ten feet in height. The leaves have naked stems, and are smooth, oval-oblong, with a margin slightly rolled outward, and obscurely scalloped; the tip sometimes blunt, sometimes merely sharp, and sometimes long-pointed. The leaves have a coriaceous, evergreen aspect, appear dotted and netted beneath, and turn black in drying. Flowers white, in cymose clusters, on stems an inch or two long, and covered with minute dots. Berries dark blue.—Rare. Found in swamps.—June.

Viburnum Oxycoccus Ph. Cranberry Viburnum. A shrub from five to eight feet high, with spreading branches. Leaves paler beneath, three-nerved, three-lobed, acute at base; lobes spreading, long-pointed, with large, unequal bluntish teeth. The leaf stems are grooved, and have about two glands. The outer flowers of the cluster are barren, having white corollas, (large for the genus,) with a tube abruptly expanded into a flat border. The fruit ripens late, remaining after the leaves have fallen; is intensely acid, and somewhat bitter, and resembles the common low cranberry in shape, size, and color.—Mountain woods; in Lancaster, N. H., and in Maine.—June.

Xylósteum.

Shrubs of this family have a calyx five-toothed; a corolla funnel-shaped; also, two berries, joined at base, and containing many seeds.

Xylósteum ciliatum Ph. Ciliated Fly Honeysuckle. From three to four feet high, with spreading branches. Leaves opposite, short stemmed, thin, ovate, hairy beneath when young, and a few of them heart-shaped at base; also, ciliate, the margin being more or less fringed with parallel hairs. Flowers yellow, funnel-shaped, hardly an inch long, and growing in pairs in the axils of the leaves. The style projects out of the corolla, which has short, acute divisions, and a slight spur at base, below a swell. Berries egg-shaped, in pairs, not growing into each other.—Mountains; Vermont, New Hampshire.—May, June.

Xylósteum villósum R. and S. Hairy Fly Honeysuckle. A shrub from two to four feet high—much smaller than the preceding—with its young branches hairy. Leaves obtuse, oblong, oval, or inverted egg-shaped. When young, they are quite hairy; but they grow smoother by age. Flowers in the shoulders of the leaves—yellow, funnel-shaped, about half an inch long, with stems much shorter—the corolla hairy, and style protruding. Berries red, or purple, in pairs, growing into each other.—Mountain swamps; White Mountains.—Blossoms in June.

Yours,

Watertown, March, 1836.

E. B. KENRICK.

ART. VI. *Notices of new and beautiful plants figured in the London Floricultural and Botanical Magazines; with some Account of those which it would be desirable to introduce into our Gardens.*

Edwards's Botanical Register, or Ornamental Flower Garden and Shrubbery. Each number containing eight figures of Plants and Shrubs. In monthly numbers, 4s. colored, 3s. plain. Edited by John Lindley, Ph. D., F. R. S., L. S., and G. S., Professor of Botany in the University of London.

Curtis's Botanical Magazine, or Flower Garden Displayed, containing eight plates. In monthly numbers, 3s. 6d. colored, 3s. plain. Edited by William Jackson Hooker, LL. D., F. R. A., and L. S., Regius Professor of Botany in the University of Glasgow.

Baron Ludwig.—In our last we made a few remarks in relation to this gentleman, who, we stated resided at the Cape of Good

Hope, where he devotes his time to the improvement of horticulture and floriculture in the Colony, by introducing various kinds of plants. Since those remarks went to press, the Massachusetts Horticultural Society, as will be seen in another part of this Magazine, has received a valuable present of a large number of various kinds of South African bulbs, and a great variety of South African, Australian, and East India seeds. A letter was read before the society, which was received with the bulbs, and read, in which he states that among the American seeds, most desirable to introduce to the Colony, are the different species of oak. Very few American shrubs or trees have yet been introduced and "even the most common" will be acceptable. BARON LUDWIG remarks that "nothing will be more pleasing to him than to have a constant intercourse and exchange of plants, seeds, bulbs, &c., from the Colony for indigenous plants, seeds and bulbs, from this country." We believe it is the intention of the Horticultural Society to forward such a variety of seeds as they can at this time collect together; and we doubt not that any thing will be very acceptable from individuals who feel interested in the advancement of the Society. Seeds of oaks and other large kinds should be sent enclosed in a box of *earth*, or immersed in *tallow*.

The Annual Dahlia Register, for 1836, is the title of a new work which has just made its appearance in London. It contains upwards of *fifty highly colored* figures of different varieties of the very best flowers. The cultivation and management of the dahlia is detailed at length.

The Hon. and Rev. Wm. Herbert is preparing for publication a revision of the natural order *Amaryllacæ*. Dr. Lindley is also engaged on a work on the *Orchidacæ*, to be called the *Sertum Orchidum*, or, "a selection of the most remarkable of the tribe, in a manner worthy their interest and beauty."

DICOTYLEDONOUS, POLYPETALOUS, PLANTS.

Malvaceæ.

HI'BI'SCUS

Rosa sinensis L. Single flowered Chinese Rose Mallow. A stove shrub, growing six or eight feet high; with very showy flowers, of a deep rose color; appearing in September; a native of China; propagated by cuttings Bot. Reg., 1826.

This plant is the origin of all the beautiful double varieties of the Chinese hibiscus, which are generally cultivated in stove collections, and which are among its finest ornaments throughout the year. It is rather rare in the English collections, and we presume still rarer in our own, as we have never, to our recollection, met with a specimen. Dr. Lindley remarks that it is "much handsomer" than the double varieties: that, "instead of a crowd of ragged, unequal, ill-arranged petals, destitute of all symmetry,

occupying the centre of the flower, we have a long graceful curved crimson tube, terminated by a brush of bright yellow anthers, which surround five little crimson velvet cushions of stigmas."

We have no doubt but that many will admire this species much more than the double varieties; but the generality of lovers of flowers will prefer the latter. In China this species grows spontaneously, and is employed for many purposes. In Cochinchina, it is so common as to be used for garden hedges. (*Bot. Reg.*, Jan.)

Aristolochiaceæ.

ARISTOLOCHIA.

fœtens Lindl. Stinking Birthwort. A stove plant; with large showy flowers, of a variegated purple and dirty yellow; appearing in June; a native of the West Indies; propagated easily by cuttings. *Bot. Reg.*, 1824.

A singular plant, with flowers of a large size, which "are beautifully variegated with purple and dirty yellow; they have a most disagreeable, disgusting smell, which will prevent the plant from becoming common." The species is nearly allied to *A. grandiflora*, from which it is distinguished by the smooth tube of its calyx, &c. Introduced from the West Indies, where it is a native, by Mrs. Marryatt, in whose stove it flowered in June, 1835. (*Bot. Reg.*, Jan.)

Thymelæacæ.

PIMELEA

ligustrina *R. Brown*. Privet-leaved Pimelea. A green-house plant, growing four or five feet high; with delicate white flowers; appearing in March and April; a native of Van Dieman's Land; propagated by cuttings. *Bot. Reg.*, 1827.

"A neat species" of this pretty genus, "found from Van Dieman's Land to Port Jackson, and growing in its native places as much as ten feet high." The flowers are of a very delicate white. Leaves ovate, veined, pubescent, much resembling the common Prim, or privet, from which its specific name is taken. It flowered in the nursery of Mr. Lowe, Clapton, in March, 1834. It grows freely in a well ventilated green-house, and is easily increased by cuttings. (*Bot. Reg.*, Jan.)

We have now in bloom *Pimelæa rosea*; it is a most charming species; although we raised the plants from seed, last season, they are all now in bloom, some of them not more than six inches in height. We have never seen it in collections in this vicinity, and suspect it has now flowered for the first time. *P. decussata* is also a fine species, which, together with *rosea*, should be in every good collection of plants. They grow freely in a mixture of sandy loam and peat.

Ericacææ.

RHODODENDRON.

We have now in flower *R. catawbiense*, *máximum*, *pónticum*, and *arbóreum hybridum*. Of the latter, we have had many plants in bloom, and have several which have not yet opened their buds. But two out of those which have flowered, were alike. Can they

be the true hybridum, so called, or are they seedlings raised from the arboreum, impregnated with some other species? The flowers on some of the plants are of a pale purplish red, on others of a deeper tint, and, on some, of a fine crimson. One plant which has now six umbels expanded, is of a fine clear crimson, although growing in a parlor, and has but two pale spots on the upper petals; it is extremely beautiful. *R. pónticum* (*Azàlea póntica* *L.*) *álba*, *tricolor*, *pállida*, *lútea*, and some other varieties which we mentioned in our last, will be in fine flower the latter part of the month, standing in pots in the garden.

DICOTYLEDONOUS, MONOPETALOUS, PLANTS.

Epacridaceæ.

COSMELIA (apparently from a Greek word *Kosmeo*, to ornament, in allusion to its beauty).
rúbra *Brown* Red *Cosmelia*. A green-house shrub; with ornamental flowers; color red; appearing in April and May; a native of New Holland. *Bot. Reg.*, 1822.

“A very pretty green-house plant, with the habit of an epacris.” It is found upon the south coast of New Holland, and is remarkable for its thick and rigid leaves, which fall off without leaving scars upon the branches. The flowers are of a rich rosy crimson color, and are solitary and terminal, on lateral pendulous branches. The drawing was made from a plant in the collection of the Messrs. Loddiges, at Hackney. (*Bot. Reg.*, Jan.)

E'pacris grandiflora has ripened seeds in our collection this spring, from which we hope to raise many plants.

Asteraceæ.

LASTHENIA
californica *De Cand.* Downy Lasthenia. A hardy annual plant; with pretty yellow flowers; appearing during summer: propagated by seeds; a native of California (?). *Bot. Reg.*, 1823.

We noticed, in our first Volume, a species of this genus, from which this only differs in the smaller size of its flowers, and “differently formed heads, which are impressed at the base with a cavity for the peduncle, and, like the peduncles themselves, are slightly downy.” The flowers appear for about six weeks in the year, according to the time the seeds are sown. They are about the size of the *Calliopsis* (*Coreopsis*), and, although not quite as showy, are nevertheless very beautiful; a native, we infer, from the name, of California. (*Bot. Reg.*, Jan.)

Orchidaceæ.

PLEUROTHALIS
picta *Lindl.* Painted Pleurothaelis. A stove species; with small flower; appearing in March; of a yellow and red color; a native of Demarara. *Bot. Reg.*, 1825.

“A graceful, pretty species,” with very small delicate flowers; the whole plant growing and blossoming under a bell glass. The drawing was made from the collection of the Messrs. Loddiges. (*Bot. Reg.*, Jan.)

DENDROBIUM

densiflorum Wallich. Dense-flowered Dendrobium. A stove species with splendid showy flowers, appearing in May; color pale yellow; a native of India. Bot. Reg., 1828.

This, according to Dr. Wallich, "lovely orchidea," is a native of India, and is cultivated in the Calcutta Botanic garden, from whence it was sent to England by him, and flowered in the splendid collection of plants of the Messrs. Loddiges, last year. The flowers, which are orange and yellow, appear in a dense raceme. It is one of the handsomest of the dendrobiums. (*Bot. Reg.*, Jan.)

ART. VII. Calls at Gardens and Nurseries.

Amateur of Mr. S. Sweetser, Cambridgeport, April.—The show of geraniums here, has been exceedingly fine. Upwards of fifty varieties, many of which are new, have contributed to make a splendid show. Of those which are of late introduction, and which may be classed as desirable kinds, are, *Clintonia*, *Gowenium superbum*, *Duke of Reichstadt*, *Brudinella*. *Clintonia* is a beautiful variety, with red upper petals, striped with a darker tint, and the lower ones very pale pink. A new variety received from Dennis's collection, last season, but the name lost, promises finely. We wish that more attention was given to this superb tribe of plants. The new varieties which are raised from seed by English cultivators, and brought into notice every season, are most beautiful, and should be cultivated in every collection of green-house plants. They come into flower at a season when there are but few other plants in bloom, and serve to keep up the beauty of the green-house, until the earlier blossoming plants of the open air have begun to expand. Their culture is not yet wholly understood; but we hope that they will not, because many of the old varieties are common, be neglected.

Lophospermum erubescens, *Calampelis scabra*, *Pelvinia phœnicea*, and the new dark nasturtium, trained to the back wall, are all profusely covered with blossoms. *Malope grandiflora* is also covered with bloom.—*Conds.*

Belmont Place, Watertown,—J. P. Cushing, Esq.—We saw in a slight glance at Mr. Cushing's green-houses, on May 2d, some very interesting plants in flower. At this season of the year, the glories of a collection in-doors, begin to fade, but among such a number of fine and rare exotics, there will always be something of interest. That most beautiful of the delightful genus *Ixia*, *I. tricolor*, shone conspicuous amidst its more exuberantly, but less elegant co-species. Some fine *Gladioli* were making strong flower stems. "*Ornithogalum niveum*," with a dense spike of snowy flowers, contrasted in a pleasing manner with the azure blue unexpanded buds of "*Maránta cœrulea*." That by no means common individual of the *Amaryllideæ*, "*Pancratium Amâncœes*," was conspicuous both for beauty and singularity. This species is a favorite among the Peruvian women for an ornament to their hair. Its color of a rich golden yellow, and the strong rigid infundibuliform nectary, surrounded with the usual delicate and undulate petals,—its wide and vigorous foliage,—its *tout*

ensemble, render it, in our opinion, a charming plant. Several *Begonia* were covered with the usual curious flowers of the family. "*Rhododendron sinense*" was very attractive, as was also a fine plant of "*Metrosideros speciosa*," beside which, the usual species in green-houses, (*M. lanceolata*?) was greatly shorn of its beauty. "*Hibbertia volubilis*" was climbing to the "crystal" roof, and expanding its glowing golden flowers, not remarkable for fragrance, and therefore best seen at a distance, while the humble, but far more splendid "*Gloxinia acaulis*" displayed its rich, deep purple flowers in a less ostentatious manner. "*Podanthes hirta*" was blooming near its co-genus "*Stapelia variegata*," both remarkable for their peculiar merits. Several other interesting plants were coming into, or already in bloom, as "*Callicoma serratifolia*," "*Hibiscus sinensis*" [?] "*Amaryllis vittata*," and a graceful species of *Passerina*. "*Streptocarpus Réxii*" displayed, what never before fell under our notice, a *biflorous* character, two distinct and perfectly formed flowers, each with its peduncle inserted on a common scape. Was this the first development of peculiarity of a new variety,—or owing to the strength and vigorous growth of the plant? "*Melastoma atrorubra*" was just declining in beauty. Its deep purple flowers render it highly conspicuous in a collection. Why are not the *Melastomaceae* more cultivated? De Candolle has exhibited to the world their striking merits, in his splendid Monograph on the family. Our little shining and pretty native, "*Rhexia virginica*," which is a perfect representation of the more magnificent cogeners of the tropics, may be grown with facility in a prepared peat border in every garden. "*Nerium splendens*," was expanding; one flower of which measured in diameter above two inches; a rival of the far famed and universal favorite camellia,—we mean of the *red* varieties. Let it be grown with care, and flowered in mid-winter, and heretical as may seem this opinion, we do not fear the result. At any rate it will gain more admirers in such situations, and in such a season, than now, when other and more gaudy plants seem to outrival it by their numbers or habits.—*R. L. J.*

Country residence of the Hon. T. H. Perkins, at Brookline, —April 25th. We have but time to say that the plants in the houses throughout, look in fine condition; and the quantity of fruit which is showing in the different departments, is immense. In a small house in the garden in which forcing was commenced about the first of January, and in which the roots of the vines run into the open border, grapes are nearly ripe, and on Saturday, the 20th, Mr. Cowan intends cutting several clusters. We certainly think Mr. Cowan entitled to great credit for this. The great severity of the climate, this season, against which he has had to contend, has rendered forcing very difficult. Mr. Cowan also cut cucumbers about the middle of March.

April.—We have now in bloom in our collections, several fine seeding calceolarias; some of them are entirely yellow, others yellow, beautifully marked, with small spots of a chocolate brown; and we have also a number which show buds but have not yet expanded. We hope to be able to save four or five which will possess sufficient merit to be entitled to names. Among the geraniums which are now in flower, and which may be called fine, are Napoleon, De Vere, Daniel Webster, glorianum, Involutum superbum, Clintonia, Brudinella, incarnatum, and several others, which we have not room to name; a new variety, but of which we have lost the name, received from London, last season, will also flower. Schizanthus Hookeri is now opening its blossoms; it is a splendid species, the petals being of a deep crimson color, instead of a pale red or purple as in the common species. We believe this is the first time it has ever flowered here. The plants are not so easily cultivated as the pinnatus, they requiring more heat, and they are more likely to damp off. They will however, repay all the care bestowed upon them. Several

fine varieties of noisette roses are in full bloom ; among which Adelaide d'Orleans, is a most delicate one. This tribe of roses will ultimately be the ornament of our gardens. *Mimulus variegatus* and *Smithii* have been profusely in flower all the spring. *Gilia tricolor* has also been covered with its charming flowers, forming one of the prettiest objects in the green-house. We have now in full bloom about fifty pots of hyacinths. Some of them are stronger in their growth and flowering, than any we have ever seen. We have noticed in another page, a fine specimen of the *Bouquet tendre*. Bonaparte, a double dark blue flower, is a superb kind. Among the yellows the Duchesse de Berri is the finest. Of the single blues, Voltaire is one of the best. The Countess of Holland is a beautiful double rosy red. But the most magnificent of the whole is the *Cochineal*, with single flowers, of a rich deep crimson. We have never seen any thing which would come up to this. Although a high priced kind, no good collection should be without it. About three hundred seedling polyanthus are coming into bloom ; five or six flowers promise well, and we shall probably save that number which will possess sufficient merit to name. We wish to see this flower more extensively grown. About twenty-five species and varieties of the *Pæonia* will be in bloom in June ; several of them have never yet flowered here, and we anticipate a brilliant and interesting show. A great number of very fine seedling pansies are now displaying their blossoms ; some of them are deserving of names. We are glad to perceive that these are now becoming more generally grown ; if as much attention is given to them, as has been in England, we have no doubt as fine seedlings can be raised. Mr. Walker, of Roxbury, and Wm. Carter, of the botanic garden, Cambridge, have raised a number of fine varieties, to which they have given names.—*Conds.*

REVIEWS.

ART. I. *The Gardener's Magazine, and Register of Rural and Domestic Improvement.* Conducted by J. C. LOUDON, F. L. S., H. S., &c. In monthly 8vo. numbers, 1s. 6d. each. No. LXX, for January.

THE first article is upon "the relative temperature of the earth, under surfaces covered with a vegetable coat, and under surfaces preserved bare; with a table of observations."

From these observations, (a table of which is given,) which were accurately made, it appears that with one or two exceptions, the earth beneath the surface of grass, was uniformly of a higher temperature than that under a bare surface, or that not covered with vegetation. The following are the author's remarks:—

"A careful examination of the table will present some interesting relations between the aerial temperature, the state of the weather, &c., and the temperatures of the surfaces of grass and earth. They are hardly sufficient, however, to enable it to be pronounced with certainty to what cause the difference of temperature is to be assigned; whether to some result of the principle of vegetable life, altogether distinct from the mere phenomena of heat; to chemical or other forces, put in motion by the assimilative powers of the plants; or to the simple effects of varying powers of absorption and radiation. To the latter of these conclusions I myself incline; but one most interesting, and, I believe, novel, fact is thus established; namely, that the surface of our earth is considerably affected, as to its temperature, by the vegetation that subsists upon it. Its temperature is proved to be increased by this covering; and we cannot fail to recognize in this one of those innumerable and ever wondrous adaptations by which the Author of nature has most fitted our system to the living beings it is destined to support."

The object of these observations was, to determine how far it was advantageous, or otherwise, to cover the surface of vine and peach borders with a clothing of turf. And the author's conclusions, though at variance with the opinions of cultivators, seem quite rational, and are deserving of particular notice; we commend them to the attention of our readers:—

"The opinion of working gardeners is usually, I believe, unfavorable to this, under the impression that the grass makes the soil beneath cold and damp. The table shows that this view is unfounded, and that a great advantage may be expected from the covering, both by increase of temperature, and the preservation of a more equable degree of moisture. The advantage, in point of appearance, of a vine or peach border, clothed with velvety turf, over one bare and brown, is sufficiently obvious. I believe it is admitted, that plants or crops should never be grown on such borders; but the amount of vegetable nutriment abstracted from the soil by a short turf kept close is exceedingly small: and, where borders are made very rich, they should be covered with 3 in. of sharp sand, and

over that 2 in. of soil, in which the grass might be sown; thus placing a stop between the grass and the rich earth, in order to prevent the former from becoming rank, and the latter from being deteriorated. Further experiments on the subject should be made, to determine the effects of other vegetable surfaces, as mint, thyme, &c., upon temperature; the variations produced by long and short grass; and also its effects on temperature in winter as well as in summer.

"I may mention that a peach border of eighty yards in length, which has been treated in the above way now for three years, produces luxuriantly."

Art. 2 contains some remarks on the "necessity of the study of botany and entomology to gardeners." The profession of the gardener in England, is, at the present time, one of considerable acquirement, and the requisitions which would formerly have been sufficient for a good one, would now go but little ways towards fitting him for that duty. When gardening shall have acquired that perfection in this country, which it has in Britain, it may be thought that then will be sufficient time to impress upon gardeners, the importance of a knowledge of botany; and that in its present state, there is no need of such a sacrifice of time, and perhaps expense, towards attaining what will not be wanted; we would, however, disagree with those, if there are any, who are of this opinion, and urge upon all who are interested in horticulture, the importance of giving a considerable portion of their leisure time, to the study of botany and entomology; convinced as we are, that it will contribute greatly to the pleasure of the amateur, and interest, as well as facilitate, the gardener in the cultivation of the different objects under cultivation. We have often wished that our horticultural societies, under whose auspices gardening has advanced in a wonderful degree, would induce gardeners to make botany a study, and also, by some reward, to induce them to form *herbariums* of our indigenous plants, or such at least as can be easily collected within the vicinity of their residence. The study of entomology, too, as a means of acquiring a better knowledge of the character and habits of the innumerable insects, which destroy vegetation, is very important, and has been much neglected. We should not so often hear of the destruction of whole crops of fruit—the sweeping off of plantations of trees, or other disasters, attributable to insects, of whose habits little or nothing is known, if they were made a study. But we are certain that all are convinced of the importance of more attention to these subjects, and we here adopt the closing words of the author in saying:—

"Let these two important branches have full share of your attention with the rest of your professional pursuits; collect specimens of plants wherever you can; dry them, and fix them in the usual way in your specimen book; and, if your instructor should be ignorant of the names of any of them, take every opportunity of asking other gardeners.' I think I need not add that these acquirements will lift a young man much above those gardeners who have repeatedly to confess, on being asked the names and descriptions of flowers or trees, that they have not paid much

attention to plants, having almost exclusively applied themselves to forcing and the kitchen-gardening department. A young man, following the study I have pointed out, instead of thus degrading himself, will be daily acquiring the most important knowledge of a part of his profession, which will, at the same time, be most interesting and useful to himself, and of estimable value to his patrons."

The notes of a gardening tour in Prussia, Germany, &c., make up the 3d article, and relate chiefly to large specimens of different species of trees.

Mr. Kléman, head gardener to the King of Prussia, it is stated, "has rendered himself celebrated, by applying liquid manure to orange trees, which, when used with prudence is always successful." *Nelumbium speciosum*, in Germany, grows in such quantities as to be thought of little value. Several of the gardens in Germany, have fine collections of plants and shrubs.

Art. 4 is the "design of a public garden, made for an English corporate town; with a list of trees and shrubs to be planted in it, with their prices. By the Conductor. The piece of ground does not exceed *three* acres, "unfavorably circumstanced," and the attempt is made to make the most of it, at the least expense. The article is not of much value without the accompanying plate, which occupies two whole pages. The following which are some of the author's remarks, may be read with interest:—

"It is recommended that all the trees and shrubs shall be procured of small size, as being much less likely to die, in consequence of removal to a bleak situation, and as more likely to grow rapidly in well-prepared soil. Instead of bestowing more expense than usual in purchasing large plants, it is recommended rather to give extra preparation to the soil, and even to add to it manure. The mass of rhododendrons and azaleas will require peat soil, as will a few of the other trees and shrubs; and the beds of roses will require rich mould.

"The double and Chinese roses are recommended to be planted in groups by themselves, and also the herbaceous flowering plants; and on no account whatever are either double roses, or herbaceous flowers, to be planted among the shrubs.

"It is recommended that, in purchasing the trees and shrubs, it be made a condition with the nurserymen from whom they are procured, that they should name one plant of each kind with a zinc label written on with prepared ink, and fastened to the plant with a metallic wire. By these means the names of the plants will remain attached to them, and unobliterated, for two or three years; and in the mean time, as likely to give a great botanical interest to the garden, it is recommended that one plant of each kind should be named, with a large conspicuous label, placed sufficiently near the walk for any person to read it without moving off the gravel. These labels may be formed of zinc, or thin board painted white, from 2 in. to 3 in. broad, and from 3 in. to 4 in. long, and fixed to the end of wooden rods. For shrubs close by the turf verge, these rods need not be above a foot in height; but when a tree is to be named which stands back from the walk, and has low shrubs in front of it, the rod should be of such a length as that the label may overtop the shrubs. On each label should be painted the scientific and English names of the plant, its native country, and the year of its introduction into Britain. This naming of the trees will, it is conceived, very greatly add to the attractions of the gar-

den, more especially as a place of resort for young persons, and consequently increase its value to the town.

"In the management of this garden, the ground in which the masses are planted will only require to be kept clear of weeds, and covered with the short grass which is mown from the glades. As the trees and shrubs advance in growth, the duplicates will require to be removed; and, after this, both trees and shrubs must be prevented from touching each other by pruning. While this is attended to, care must be taken that, in all the masses near the boundary fence, both trees and shrubs be allowed to grow as close to each other as they can, without coming into absolute contact. The masses of roses will require to be taken up and properly replanted in fresh soil every three or four years, and the masses of flowers, which may be chiefly hardy showy annuals of low growth, or entirely mignonette, will also require the soil to be occasionally renewed. It must be constantly borne in mind by the managers of this garden, that a border or plantation of trees and shrubs which are never allowed to touch, but which are, at the same time, placed as close together as they possibly can be without touching, produces a much more effectual screen than a thick plantation. In a thin plantation, such as we allude to, there is a compact mass of foliage on every tree and shrub, from the ground upwards; and, if there are only two rows of such trees and shrubs, the plants of the one row alternating with the openings of the other, the screen will be as effectual as if it consisted of a holly hedge. If this mode of keeping up a screen, both in the boundary plantations and in the masses which separate the walks, be neglected, the effect of the garden will very soon be materially injured, and the plantations, so far from having that gardenesque character which they are intended to have, will resemble mere commonplace masses of shrubbery; the boundary will be seen from every point of view; the eye will penetrate the interior in all directions; and the effect of the whole, as a work of art, will be destroyed."

The list of plants, suitable for ornamenting these grounds might be of some service, but it is too long to copy. The whole number of plants is as follows:—

Evergreen trees and shrubs, 272 plants. Deciduous trees, 178 plants. Deciduous shrubs, 537 plants. Climbers, 40 plants. Select trees and shrubs, 115 plants. Supplementaries, 100 plants. Whole number, 1242 plants.

Art. 5 is a "description of Woodbine Cottage, Torquay, the residence of Mrs. Johnes." In this we notice that the fine guava, *Psidium Cattleianum*, fruits to perfection without fire heat.

Art. 6 contains a list of the places in Britain, from which return papers have been received for the *ABORETUM BRITANNICUM*.

Articles 7 and 8, are upon the cultivation of mushrooms. The first method is as follows:—

"About the middle of July, when preparing the ground for early broccoli or Savoy, I have some of the best fresh horse dung, that is short, and has not much straw in it, dug in the furrow, under the soil where the row of broccoli or Savoy plants are to be planted. The furrow is filled pretty full of the dung, and trodden rather firm, and a few pieces of the spawn are put in it; the mould is then dug over it, and the digging is continued, until where the next row of plants is intended; which furrow is filled with dung and spawn as the former; and so on, as far as the ground is to be planted. After the ground is dug, the plants are planted, and nothing further is required. I do not use any more dung in this way than

would be required for the same quantity of ground if spread regularly over it in the usual way; and the plants grow more vigorously by having the dung under them. I consider that the broccoli or Savoy plants are of great service to the working of the spawn, by shading it from the hot sun and heavy rains.

"About the middle of September, the mushrooms come up in great quantities, large and fine. I have this morning (Sept. 21) gathered nearly half a bushel of large mushrooms from about two poles of ground, planted as above; and have had two or three gatherings before, and expect to have a good many more before the season is over."

The method adopted in the latter article is entirely new to us: we have never before read of the Mushroom Stone. The author writes thus:—

"I have no doubt but you, and many of your correspondents, are acquainted with the mushroom stone; but, as I have not seen it mentioned in your Magazine, I send you the following account of one that was under my care for upwards of two years. It was sent to Mr. Thorburn of Murth, from Calabria, in Sicily, with directions to give it a little water when it appeared dry, which was generally three or four times a week in dry weather: and, in the course of a fortnight after I received it, a couple of mushrooms made their appearance, which grew to be very large; I think, about 9 in. in diameter. They were porous beneath, in place of gill, as in the common mushroom; consequently, they appeared rather to be a species of *Bolëtus* than a species of *Agaricus*. However, they were of excellent flavor, and the ship captain who brought the stone home, told me that it produced three mushrooms at sea, which, he said, were very fine. In three or four weeks after the two above-mentioned were gathered, three or four more came up, and so on, for the first year. The second year it was not quite so productive; and, in 1833, my successor informed me that the mushroom stone was nearly exhausted. I think eight or ten such stones, would supply an ordinary family with mushrooms for two or three years."

ART. II. *Paxton's Horticultural Register*. Edited by James Main, A. L. S. In monthly numbers, 8vo. 1s. each. Nos. LV, LVI, and LVII, for January, February and March.

SINCE the editorial department of this magazine has passed into the hands of Mr. Main, it has much improved, and become very interesting to gardeners. Previous to his entering upon his duties, and latterly while under the direction of Mr. Paxton, it contained little that was worthy of the subject of horticulture, and was decreasing in public favor, if we might judge from many circumstances. When this magazine was first undertaken, it was filled with useful and excellent practical articles, and the first volume is

a valuable addition to the already extensive works on horticulture. It gradually, however, became less entertaining, and when Mr. Paxton commenced his *Magazine of Botany*, all his labor seemed to have been betowed on that, to the neglect of the *Register*, if we may judge from the articles which were first published in the former and copied at length into the latter, so that persons taking the two works, received but little more benefit than if they took but one. Mr. Paxton's time, also, we presume—being forester and head gardener to his grace the Duke of Devonshire, whose extensive ranges of houses, are so deservedly celebrated—must be somewhat limited, and consequently he could not bestow that care upon it which he probably would have done had this not been the case. The editorial department was at length put into the hands of Mr. Main, who has rendered it, by his able pen, altogether another work. We shall occasionally look it over, and whatever we find that is useful to our readers we shall lay before them.

The January, February and March numbers each commence with an article upon the “shrivelling,” or shanking, sometimes called, of grapes. This disease, which is always more or less observable in vines grown in green-houses and graperies in our vicinity, has never been satisfactorily accounted for, although many and various causes have been assigned to its appearance. From whatever cause it does arise, it is a very destructive disease to the grape, and frequently a large part of the clusters of a whole crop are much injured. Some cultivators attribute it to a damp cold border; some to dampness of the soil in the house; many to want of air when the fruit is coloring and ripening, and others to overbearing the vines. We have had some experience in raising grapes, but not sufficient to warrant us in making any assertions in regard to what we imagine to be the cause. We have been partially troubled with the disease; but we intend to make such observations and to note down such facts as are likely to throw additional light upon the subject. For the present we would direct attention to the following article, which comes nearer to our ideas of the cause than any thing that we have before seen:—

“In reference to the “shrivelling of grapes,” I beg leave to add a few remarks to those of Mr. Denyer, not only with the view of supporting his statements, but also to mention the result of my experience, for the benefit of my “younger brethren.”

A range of houses was placed under my care some years ago, where the grapes produced had been bad colored and shrivelled. I forced them two seasons, and, although those berries which did swell were well colored, yet the extremities of the bunches shrivelled. Mr. Judd had stated in the “Transactions,” that inattention to airing the houses was the cause. Several gardeners of high repute, to whom I mentioned the circumstance, were of the same opinion. As, however, I had been duly initiated into the routine of forcing, and had attended to these

houses myself, I knew the imperfection could not arise from any such cause.

From several observations I had made, very similar to those mentioned by Mr. D., I came to a similar conclusion, viz., that it originated in a want of energy in the root, and which, as he has justly stated, might arise from a variety of causes. In my case, I conceived it to arise from a poor, cold border. The border, I was informed, had been duly drained when it was made; but, as the situation of the garden was low, and the subsoil strong clay, and an excavation having been made for the border, it was not difficult to understand that the roots must suffer from cold. Moreover, the border was shaded by a row of espalier trees, which grew a short distance from it. I had not the opportunity of raising the roots to the surface; I therefore removed the apple-trees, lowered the walk at the front of the border, and, as the stems outside of the house, were naked, I laid a covering of decayed leaves and dung on the surface. By these means the roots were ultimately acted upon by the genial rays of the sun. Within the houses, I left but a thin crop of grapes, and a limited supply of wood for the succeeding year. The result was most satisfactory.

My usual practice now is, to dress the border every *summer* with decayed leaves and a little loam. In a cold, wet season, I leave but thin crops; in a dry, hot season, good crops. When the latter is the case, I supply the roots with water most abundantly, without any fear of paralyzing their efforts. The grapes produced are generally admired for their size, color, and flavor.

To *young gardeners* I would say, do not be too anxious for a great crop in your *first effort*. Endeavor to ascertain the capabilities of your vines. Attention to the ripeness of the wood and the circumstances of the place, will very much assist you in this particular. If you are required to make new borders, elevate them as much as you conveniently can, particularly if the site be low and damp. A bed of compost from eighteen to twenty-four inches is quite depth enough. Extend the roots horizontally, as much as circumstances will admit.

To *gentlemen* may I be allowed to say, desire to have good fruit rather than great abundance: make every allowance for local circumstances, and the natural difficulties your gardener has to contend with. Do not place implicit reliance on the writings or the sayings of any man, merely because he has obtained a degree of notoriety;—many write and talk from no other motive. Mr. Judd, I fear, is amongst the number. Why, every gardener of ordinary observation knows that when the “cuticles of the berries” are acted upon by the sun’s rays, it is by the concentration of the rays acting like a burning-glass, and injuring only the part where the focus strikes: hence we see the side next the sun injured—the other side perfect. I have, indeed, known grapes really scalded by vapor heated to a great degree; but that is a very different thing to the “shrivelling of grapes.”

As far as I have observed, when grapes are injured from external causes, the *berry* discovers it first. In the “shrivelling of grapes,” the defect is first exhibited in the pedicle.”

Some remarks “on the different methods of training fruit-trees round the quarters or compartments of kitchen-gardens,” are very good, and contain considerable information. The old-fashioned system of distributing large standard trees all over the kitchen garden, to the utter exclusion of all vegetation underneath, will soon be exploded here, as it is already in Britain. They are not only, from many reasons, improper for the purpose, but they give a good

kitchen garden too much the aspect of an orchard. Dwarf, neatly trained trees are so much superior as regards beauty, and so much more convenient for picking the fruit, that there need not be any necessity of urging the planting of such in preference to tall standard trees. Espalier training is also a very excellent way of getting much fruit from a small piece of ground ; and we wish the system was more generally adopted here. The author's remarks correspond so near with our own ideas on this subject, that we extract them for the information of our readers :—

“To have fruit trees symmetrically trained, and which do not usurp too much space, is what would occur to every one as most desirable, and accordingly the old French and Dutch fashion of espaliers was very early adopted in this country. And so indispensable were espaliers considered formerly, that the most expensive rails, as they are called, were in many places erected for the trees. We have worked in a garden where the espalier rails were made by carpenters of the best yellow deal, with top and bottom rails, into both of which the uprights were all morticed, painted light blue, and fixed in stone pattens. Moreover, at each corner there were lock-up gates, of no manner of use, but of much trouble to the foreman, who had to see all these gates were locked every evening. And, what was worst of all, the construction was bad ; the uprights being so large, that it was impossible to keep the trees in proper form, unless nails and shreds had been used.

Many different forms of espalier rails have been invented, and of either wood or iron ; but none answer the purpose better than rough six-feet stakes, pointed and charred at bottom, driven by line fourteen inches into the ground, and connected at top by a ledge of some kind of tough wood. The stakes are about ten inches from each other, and along them the lateral branches are trained.

The most common form of training on espalier rails, is that called horizontal, that is, with an upright stem, and the branches led right and left in pairs therefrom. This is the most symmetrical and suitable for the purpose ; very little ground is occupied, and espaliers so trained are profitable and neat boundaries to the quarters of a garden. They are easy of access, either for pruning, training or gathering the fruit, and the trees are perfectly safe from being damaged by wind.

To form a tree intended to be trained in this manner, maiden plants one or two years from the graft are chosen ; and, the ground being well prepared for their reception by trenching, &c., are planted opposite a stake, to which the most central shoot is always trained. Two lateral shoots are tied down horizontally, about eight or ten inches from the ground, annually continued outwards from the stem as far as they will go, or until they have reached to the outside of the space the tree is intended to cover. Thus the young tree consists of only three shoots during the first year. At the end of the first year the central leader is pruned down to about a foot long, and this on the following summer will, or may be allowed to, produce three shoots, the topmost to be trained upright, and the others, one on each side horizontally. This method of pruning down the upright, and leading the laterals horizontally, is continued year after year, until the central shoot reaches the top, when, if the two last laterals are high enough, it is entirely pruned off.

When a young tree is very vigorous, the desired form may be more expeditiously obtained, by making the upright produce two pairs of

laterals, instead of one pair. This is done by stopping the upright when it has attained the length of twelve or thirteen inches. This will happen, perhaps, about the beginning of July; and will cause three other shoots to be produced during the autumn, to be trained as before. We have seen a young Jargonelle pear tree managed so as to produce three pairs of laterals in the course of one summer; but this is not a common case.

Some practitioners prefer having two stems rather than one, because it diverts the upright current of the sap into two channels, and thereby induces a slower growth, which is favorable to early fruitfulness. In this plan, a young tree having four shoots is planted between two stakes. These receive the two middle shoots to form the uprights, and the two outside shoots are tied down horizontally. The uprights are annually pruned down to furnish laterals year after year till the form is complete.

Whether with one or two stems this style of training always looks neat; and, when the trees are also fruitful, is preferable to any other, whether on a low wall or espalier. But it requires considerable skill and almost hourly attendance during the summer, to accomplish this desirable result. The natural tendency of the tree is to rise upward; and instead of the buds which come forth from the stem and branches being formed into flowers, they are chiefly produced into barren shoots. A strong growth of these are annually produced, and, for the most part, at right angles to the branches; and therefore, departing so entirely from the style of training, must necessarily be pruned off to maintain the symmetry of the tree. If this luxuriant summer growth be allowed, it at the same time strengthens and extends the roots by prompting them to increased action in the following year; a circumstance rather to be avoided than encouraged in a fruit tree.

To obtain the desired form, and induce fruitfulness, the vigor of the tree must be checked, by preventing all extravagant growth in the summer; and with this view the trees must be frequently inspected during the months of April, May, and June, in order to rub off *every bud* threatening to come forth in a wrong place. And of those suffered to remain to form spurs, they should be stopped as soon as they have gained a length of six or seven inches. The leading shoots at the point of the branches are never stopped till they have gained their utmost limit, or till they interfere with other trees.

This dismemberment, performed annually, soon gets the whole system into a stunted or stationary state, and until this state of an espalier be acquired, it is never sufficiently fruitful.

As trees trained as espaliers are those called spur-bearers, and which spurs bear the flowers, they are particularly cared for in pruning; always preserving those nearest the place whence they issue, so as to keep them snugly in line, and not dangling too far from the branches. The senior Mr. Harrison has given excellent directions on this branch of pruning fruit trees, and well worth the consideration of all engaged in the business.

Espaliers are planted at various distances, according to their natural volume; but as the quality of the soil always determines the growth, it is not easy to fix a rule for inter-distances. In a kindly loam of middling quality and of moderate depth, the distances may vary from fifteen to thirty feet; the nearer distances for plums and apples, the greater for pears and some sorts of cherries. Some trainers intermix the branches of proximate trees; in which case they may be planted at first, nearer together. But it is a good plan to have supernumeraries; the trouble of removing a tree from between two overbearing, or valuable neighbors, is not great, and besides it gives opportunity for selecting those most worthy the station.

MISCELLANEOUS INTELLIGENCE.

ART. I. General Notices.

A mode of Preserving the Flowers of the Pansy.—I was induced, last summer, to endeavor to preserve the flowers of some very fine pansies, by gumming them on pasteboard, and covering them with gum water; they looked very well at first; but, in a short period, the colors of several of them began to fade, while others are at present as brilliant as the day I finished them. Had all the specimens faded on exposure to the light, I should not have been so much surprised; but I cannot account for some having faded, while others remained good. Perhaps some of your readers would be kind enough to give me information as to the best and surest mode of preserving the colors. I have heard that, if the flowers are gathered under a very hot sun, the colors will stand.—(*J. L. in Gard. Mag.*)

ART. II. Foreign Notices.

ENGLAND.

The question whether Potatoes ought to be planted whole or in sets, appears to be still undecided. It is still *vexata questio*. * * * * I have no doubt but that the whole potatoes produce the greatest receipt. I proved to a friend of mine in Yorkshire, that, by his mode of cultivating potatoes, he lost not less than one thousand pounds last year. I once before addressed you on the subject of potatoes, in the hope that you would have called the public attention, and I told you I should make an accurate experiment this year. I did so, but I fear it will fail. We were without rain for six weeks; the haulm was quite burnt up, and now the weather is so wet, that I cannot take the potatoes up. However, I will note the result, be it what it may; for I think the culture of potatoes a much more important object than others seem to do.—(*R. Lowndes, Gard. Mag.*)

New Variety of the Grape.—At the September meeting of the Cambridgeshire Horticultural Society, last year, Mr. Wilmot, of Isleworth, presented specimen clusters of a new seedling grape of the Muscat kind. It is stated to be a most prolific bearer, and can be obtained to perfection from March till October. It is called Wilmot's Early Prolific Muscat.—(*Gard. Mag.*)

New Species or Variety of Onion.—In an article on Horticulture, in the *Encyclopædia Britannica*, vol. ix, p. 671, is mentioned "a pearl onion, as of recent introduction and little known. It is said to produce clusters of little bulbs at the root, the bulbs having a fine white color like the true silver-skin, and being very fit for pickling. Mr. G. Don considers it a distinct species, the *Allium Hålleri* of his *Monograph*."—(*Gard. Mag.*)

Trifolium Incarnatum.—The cultivation of this plant is, we are glad to learn, spreading rapidly; and it is, in some parts of the country, generally taking the place of tares. It produces a much greater quantity of

food, and does not require much more than a tenth of the labor bestowed on preparing the ground and sowing it. It also comes in a fortnight earlier.—(*Gard. Mag.*)

Thunbergia alata var. *alba*.—At the exhibition of the Devon and Exeter Botanical and Horticultural Society, specimens of a new variety of the *Thunbergia alata* were shown for the first time in the country. The flowers are clear white, with a jet black eye.—(*Gard. Mag.*)

Large Hydrangea.—There is a hydrangea growing in the open ground at Tringwainton, near Penzance, which is forty-five feet in circumference, eight feet in height, and had above one thousand three hundred flowers on it last year. There are some hundreds of hydrangeas in the plantations at Tringwainton, which have all sprung from this plant.—(*Gard. Mag.*)

Male Carle Apple.—This variety was lately exhibited at the London Horticultural Society's exhibition, and, in the report in the *Gardener's Magazine*, it is stated that "this exceedingly delicate and beautiful apple, in Finale, near Genoa, is only here [England] a vapid, pale, and a very poor-flavored apple; such is the effect of climate!" The variety has been exhibited before the Massachusetts Horticultural Society, and its qualities have been considered very inferior.—*Conds.*

ART. III. Domestic Notices.

Early Potatoes.—Mr. Walker, of Roxbury, at a very late meeting (April 23d) of the Massachusetts Horticultural Society, presented for exhibition a potato of this year's growth, of large size. It was one out of a specimen of about half a peck presented at the meeting of the New York Horticultural Society on the 19th ult. It was raised at Hyde Park, the residence of E. Holbrook, Esq., by his gardener, Mr. Horrvell. Mr. Walker received this specimen when at New York, from one of the members of the Society.—*Conds.*

New Variety of Pumpkin.—The Hon. Abbott Lawrence, member of Congress, of this city, has presented to our friend and cotemporary, T. G. Fessenden, Esq., a few seeds of a new kind, called the "seven year's pumpkin." Its principal valuable property consists in the great length of time it may be kept in a sound state of preservation. Mr. Lawrence states in a letter that he was informed that "one which was pulled three years," is now as "sound as it was the day it was taken from the vine." The seeds were from the State of Pennsylvania.—*Conds.*

Bulbs presented to the Massachusetts Horticultural Society.—The following are some of the kinds which were sent to the Society, by Baron Von Ludwig, of Cape Town, Cape of Good Hope, and distributed among the members:—*Amaryllis falcata*, A. var. sp. from frontier, *Babiana stricta* var., *B. rubra-cyanea*, and *plicata*, *Brunsvigia*, sp. *Bulbine pugioneforme* and *floribunda*, *Antholyza montana* and *prealta*, *Hæmānthus coccineus* and *tigrinus*, *Ornithogalum inconspicuum*, *aureum* and *aureum* var., *Cyrtanthus*, new sp. not described, *Vallota purpurea*, *Watsonia* sp., *spicata*, *Meriana*, *Meriana* var., and *aleioides*; *Nerene sarniensis* and *undulata*, *Disa chrysostachya*, *Gladiolus hirsutus*, *blāndus*, *alatus* and new sp.; *Hesperantha* sp., *Tritonia lineata*, *longiflora* and sp., *Ixia flexuosa*, stricta, stricta var., and *viridiflora*; *Cyanella lutea*, *Peyrousia corymbosa*, and *falcata*, *Eucornus* sp. The bulbs were received in fine order.—*Conds.*

Transplanting Evergreen Trees.—In our last number, at p. 155, are

some most excellent remarks upon the proper season and method of planting evergreens, by our valuable correspondent, Mr. Downing, of Newburgh, N. Y. As this is just the time, we would call the attention of our readers to his remarks as they may almost be considered as the *ultimatum* of what can be said upon the subject in so few words. In looking over *Mr. Nab, on "Planting Evergreens,"* however, we noticed the following paragraph which contains some hints upon the importance of speediness in performing the operation:—"In planting evergreens in winter, a dull, calm day answers very well; but in autumn or spring, a moist rainy day is best. Whether planting be done in a dull day, or a wet day, or a dry day, it is very necessary to keep in view the expediency of keeping the plants for a short time out of the ground as possible; if only a few minutes, so much the better; and, in all cases when it can be done, where great numbers are to be planted, we should, if possible, have some men stationed to take up the plants, others to carry them, and a third set to put them into the ground. In all seasons, situations, and soils, the plants should be well soaked with water, as soon as the earth is put about the roots." More than one half of the evergreens which are yearly set out, die from a neglect of watering alone; but if the above directions are followed, we are certain that we should not hear the universal complaint that we now do, of the difficulty of making evergreens live.—*Conds.*

Variation of Foliage.—A beautiful instance of a not unusual occurrence of the variation observable in the leaves of the Red Cedar (*Juniperus virginiana*) is now lying before me. The specimen comprises the usual imbricated leaves, an abundance of abnormal ones, becoming acerose, elongated, and the gradual transition back to the original form on the same branch. Those leaves which have undergone a mutation, are alternate and opposite, perhaps, in fact, produced *by the rapid elongation of the axis of the shoot.* The upper surface of each leaf is of a very perceptible glaucous hue. Whenever such a change takes place on a tree of this species, it may be observed at a considerable distance, on account of its peculiar and dissimilar form.—*J. L. R.*

Pentstemon campanulatus and atropurpureus.—Are these two beautiful species perennial? If perennial, are they hardy? We had several species in our garden last fall, and all are alive now, and growing vigorously, except these two which were destroyed by the winter. In Loudon's *Hortus Britannicus*, they are enumerated as *frame* perennials; have any of our readers ever had them live through our long winters?—*Conds.*

The New Zealand Flax, Phormium tenax.—This plant, which is said, in its native *habitat*, to furnish a very strong and durable fibre, which is manufactured into cordage and coarse linen, is worth at least the attempt at acclimatizing in the Southern States, where it might offer a new staple for cultivation. It has been stated that it is sufficiently hardy to bear the winter of Cork, Ireland. We wish some spirited cultivator who would give the experiment a fair trial, would attempt it in a favorable site south of the Potomac. We are authorized by a gentleman of this neighborhood, who has plants in his possession, to say that he will place the *New Zealand flax* in the hands of any gentleman of the Carolinas, Georgia, or the more southern States, who will engage to test the experiment fairly, and make known the result.—*A. J. Downing, Botanic Garden and Nursery, Newburgh, N. Y.*

Sanguinaria canadensis.—This truly beautiful vernal bloomer should be introduced into every garden. The flowers make their appearance almost as soon as the snow-drop (*Anemone*), and continue in bloom for several days, during which time they are the most showy ornaments of the border, but few plants putting forth their flowers at such an early

season. We were first struck with its elegance from observing, in the Botanic Garden at Cambridge, several little patches of it when in its full flowering state; they might be seen from any part of the garden, so profuse were their snowy blossoms. It is much prized in England, where it is cultivated with great care. It grows beautifully in several locations in the vicinity, where it can be easily procured, as it can, we presume, be had at any of the nurseries. The plants delight in a shady moist place; and, for this reason, are valuable, as they will thrive under the drip of trees, or on borders where the sun shines but a few hours during the day. A partially decomposed leaf soil or peat is preferable, in which they will grow vigorously, and spread with great rapidity. We transferred only two small plants to our garden a year since, and there are now in blossom more than thirty flowers.—*Conds.*

Extract from a letter, dated Cincinnati, March 11, 1836.—"Our winter has been severe and protracted; yesterday a fall of snow six inches, and to-day very cold. Should our climate continue as it has been for two years, we may lose some of our southern species of plants, and perhaps have some of the more northern naturalized. *Erigénia bulbösa* and *Saxáfraga virginieusis* often bloom this month (March); this season they cannot be out till April."—*Com. by J. L. R.*

From my Spring Calendar.—The following is the difference between the advance of the spring of 1831 and that of the present year, 1836, as seen in the flowering of plants:—

1831. March 2, <i>Galánthus nivális.</i>	1836. April 8, <i>Alnus serruláta.</i>
" 7, <i>Crócus vernális.</i>	" 12, <i>Corylus avellána.</i>
" 13, <i>Ictodes fœtida.</i>	" " <i>Sáliz eriocephala.</i>
" 15, <i>Alnus serruláta.</i>	" " <i>Crócus vernális.</i>
" <i>Viola odoráta.</i>	" 18, <i>Acer rubrum</i> , about
" 27, <i>Corylus avellána.</i>	to flower.
" 31, <i>Pópulus tremuloides,</i>	" " <i>Hepática trilóba</i> , just
<i>Sáliz eriocephala.</i>	expanded.

1831. April 3. *Acer rubrum*, *Ulnus americanus*, *Juniperus virginiana*. April 12. *Hepática trilóba*. April 14. *Houstonia cærúlea*, *Sanguinária canadénsis*, *Saxáfraga vernális*, *Portentilla simplex*, *Gnaphálum platagenoides*, *Cynoglóssum omphalódes*, *Béllis perémnis*, *Pulmonária officinális*. April 15. *Hyacinthis*, opening. April 20. *Anemone nemorósa*, *Leóntodon Taraxacum*, *Erythrónium americanum*, *Cárex vestíta*. April 21. *Viola ováta*, *V. blánda*, *Cóptis trifoliáta*, *Cáltha palústris*. *Apricot in full flower.* It will be observed that garden and native plants are mentioned. In both instances the distance from Boston was the same, about fifteen miles.—*A constant Observer of Nature.*

Utility of the Prickly Pear (Cactus opúntia).—We extract from an interesting article on the vegetation of Mount Etna in Prof. Hooker's Companion to the Botanical Magazine, the following note upon one of our indigenous plants:—"On the roughest lava thrives the *Indian* or *Prickly pear*, *Cactus opúntia*, of which the large cooling fruits are sold at the rate of one Sicilian gran, or less than 2*d.*, for thirty. This plant is one of the most useful presents of the new to the old world, as it grows on the poorest and most rocky soil, where nothing else will vegetate, requiring no attention, and even its succulent jointed stems are greedily devoured by goats, while the fruits are highly acceptable to the poor; and strangers, who seldom like the flavor at first, soon learn to value their cooling properties. There are numerous varieties—light and dark red and green; the latter, called *Moscarelli*, possesses the finest flavor. The *Cactus opúntia* is of much service to Mount Etna, by rendering the fields of lava capable being worked, as the roots penetrate every crevice of the stone and soon burst the largest blocks asunder by their gradual increase. It

is reckoned that, within thirty years of the *Cactus* being planted, cultivation may commence on the lava fields."—*A. J. D.*

Vigor of annual growth in the Alder (Alnus serrulata). The effect of ringing, girdling, or of a ligature round the living and growing stems of plants and shrubs, is well known. The sap ascending by the usual mode, meets with an obstacle in its descent through the alburnum and bark, and becomes turpid, swelling out above the interruption into a callous or knot. While collecting the cocoons of "*Attacus Prometheus*," a few days ago, my attention was attracted to a permanent and strong ligature around the vigorous branch of the common alder, on which the insect of the preceding year (1834) had spun and suspended itself in its silken cradle. The entire growth of one summer had been completed, and the silken band was still strong. The circumference of the upper part of the branch was rather more than double that beneath the suspended cocoon, though each must have made its annual increase of wood.—*R.*

Desideratum.—A practical essay on the successful cultivation of ranunculuses and anemonies in pots, would be very interesting to a lover of those splendid productions of floral skill.

Quere.—Has the *Verbena melindres* (*chamædrifolia Swt.*), ever produced seed in our green-houses or in the open air, or any attempts been made to produce varieties?

Enkiánthus quinqueflora.—"Drawings and specimens of *Enkiánthus quinqueflora* were first brought to England under the name of *Andrómæda arborea*, in 1794, as no small plants were purchasable at Canton in the previous year, but living plants were received in this country in 1812. No plant is more regarded by the Chinese as a domestic ornament than this when in flower. Small branches are sold in the streets of Canton about the first of March, and nearly for the same purpose as the holly and mistletoe are sold in London before Christmas, viz., for decorating places of worship, and for placing before the images of Joss, in their houses. The branches are cut from the trees just before the flower buds are expanded, and placed in vessels of water, where they bloom beautifully. The flower buds being terminal, and each containing four, five, or six flowers of a delicate pink color, hang gracefully from the point of every sprig. Every street window is more or less decorated with these flowers in the season, which shows that there must be vast numbers of the trees in the vicinity of the city, and yet not one small plant could be found in their nurseries in the spring of the year 1794, though twenty dollars were offered for a potted plant. Another species, the *E. reticulata*, was added to our collection in 1822, and, as they are nearly deciduous trees, hope may be entertained that they may be in time inured to our climate."—*British Cyclopædia, Div. Natural History, part 21.*—*A. J. D.*

The power of the prevailing winds in diverting trees from a perpendicular position is very observable on the high plains in this vicinity. Large and strong elms, as well as more pliant species, are inclined towards the north-east, in very perceptible degrees. The quick growing kinds of fruit, particularly the pear, form, in some instances, almost perfect *bows*; and it is curious to see the power of nature completely baffling the ingenuity of man, to overcome, by props and stakes and other means, the evident proneness to a more erratic growth. The south-west wind has the most influence.—*South Hingham.*—*R.*

Bouquet Tendre Hyacinth.—We have now several bulbs of this most magnificent variety in fine bloom. On one we have counted the immense number of *thirteen* spikes, the bells amounting to nearly *two hundred*. It is one of most valuable varieties for forcing, and is a more profuse flowerer than any that we have ever cultivated.—*Conds.*

Gardening in Algiers.—There is a garden of experiment and natu-

ralization, in Algiers, of eighty acres in extent, which contains 25,000 trees, bushes, and plants, under the care of a director and twenty men. These plants include the sugar-cane, cotton tree and bush, and, no doubt, all those species and varieties of useful plants which the botanists and horticulturalists of Paris have supposed likely to suit climate.—(*Campbell's Letters from the South*).

Schizanthus Hookerii.—We mentioned in another page that this splendid species was about flowering in our collection of plants; since that was written and sent to press, several buds have opened and the plant now displays several fully expanded blossoms. It is a superbly elegant species, and, although of rather difficult cultivation, is worthy of all the care that may be bestowed upon it to grow it to perfection. It seems to require more heat than the other species and varieties, and is also of slower growth. Our plants were from seed sown in September last, and potted into small pots (number ones), in which they remained until January; they were then shifted into a larger size, and are now just flowering. Some plants which we gave Mr. Haggerston, with the hope that, under his management, they would bloom in greater beauty than under ours, we regret to state, were lost during the time he was confined to his house by sickness. No collection should be without it. *S. retusus*, which is also flowering, appears to be synonymous, or the seeds we sowed were not true.—*Conds.*

On Blights and their Causes.—Blights are often caused by a continued dry easterly wind for several days together, without the intervention of showers, or any morning dew, by which the perspiration in the tender blossoms is stopped, that in a short time their color is changed, and they wither and decay; and if it happens, that there is a long continuance of the same weather, it equally affects the tender leaves, as from the same cause perspiring matter is thickened and rendered glutinous, which closely adhering to the surface of the leaves, becomes a proper nutriment to small insects, which are always found preying upon the tender branches of fruit and other trees, whenever this blight happens. But insects are not the first cause of blights, as has been imagined by some naturalists, though it must be allowed that whenever the insects meet with such food they multiply exceedingly, and are instrumental in promoting the distemper, so that many times when the season proves favorable to them, and proper care has not been taken to prevent their depredations, it is surprising how soon whole walls of trees have suffered by contagion. The best known remedy for this distemper is, to take in the spring, just before the buds begin to burst, two pounds of soft soap, one pound of black sulphur, eight ounces of tobacco, a tea cup full of urine, three tea spoonful of oil of turpentine, and one ounce of nux vomica, to which add four gallons of rain water, boil them together till about the consistency of paint, to be put on when about milk warm with a brush, such as is used for painting. If attacked in the spring or summer, take one pound of black sulphur, one pound soft soap, and four ounces of tobacco, to which add four gallons of rain water, to be put on with a sweeping brush, and used milk warm; the garden engine may be used freely over the trees when the fruit is fairly set, with pure water, as long as is thought necessary, to clear them if possible from this glutinous matter, so that the respiration and perspiration may not be obstructed; but whenever the operation of washing the trees is performed, it should be early in the day, that the moisture may be exhaled before the coldness of night comes on, especially if the air be frosty; nor should it be done when the sun shines very hot upon the walls, which would be likely to scorch the tender blossoms.

Another cause of blights in the spring arises from sharp hoar frosts, which are often succeeded by hot sun-shine in the day time; this is the

most sudden and certain destroyer of fruit that is known; as the chilly air at night hurts the tender parts of the blossoms, and the sun shining hot up on the walls before the moisture is dried from them, which being in small globules, collect the rays of the sun, a scalding heat is thereby acquired, which scorches the tender parts of flowers and other parts of plants. The method to prevent this mischief is, to cover the walls with bunting or canvass, fastened so as not to be disturbed by the wind, and suffered to remain on during the night, but taken off every day when the weather permits; although that method is thought by some to be of little service and may be really prejudicial if the trees be too long covered, or incautiously exposed, yet when this covering is used properly, it frequently proves a great protection to fruit-trees; and if the covering be fixed near the upper part of a wall, and be fastened to pulleys so as to draw up or let down occasionally, the operation will be easy and the success will sufficiently repay the trouble.

There is another sort of blight that sometimes happens later in the spring, in April or May, which is often very destructive to orchards and plantations, which has hitherto baffled all attempts to prevent it—this is called a fire blast, and in a few hours not only destroys the fruit and leaves, but very often part, and sometimes entire trees; this is supposed to be effected by volumes of transparent vapors which approach so near to a hemisphere in the upper or lower surface, as to concentrate the rays of the sun so as to scorch the plants or trees; against this enemy there is no guard.

Another sort of blight—But that blights are frequently no more than an inward weakness or distemper in trees, will evidently appear, if we consider how often it happens that trees against the same wall, and aspect, and enjoying the advantages of sun and air, with every other circumstance which might render them equally healthy, are very often observed to differ greatly in strength and vigor; indeed, we generally find weak trees to be blighted, when vigorous ones in the same situation escape, which must be in a great measure ascribed to their unhealthy constitution. This weakness in trees, therefore, proceeds either from the want of sufficient supplies of nourishment to maintain them in perfect vigor, or from some ill qualities in the stock, or distemper of the buds or scions, which they had imbibed from the parent trees, or from mismanagement in pruning, &c., all which are productive of distempers in trees, and of which they are with difficulty cured. Now, if that be occasioned by weakness in the trees, we should endeavor to trace out the true cause; first, whether it has been occasioned by bad pruning, which is often the case; for, how frequently do we observe peach trees trained up to the full extent of their branches every year, so as to be carried to the top of the wall in a few years after planting; when, at the same time, the shoots for bearing have been so weak, as scarcely having strength to produce their flowers, this being the utmost of their vigor, the blossoms fall off, and many times the branches decay, either the greater part of their length, or quite down to the place from whence they were produced; whenever this happens to be the case it is ascribed to a blight. Others there are who suffer their trees to grow fast, as they are naturally disposed during the summer season, without stopping the shoots or disburdening the trees of luxuriant branches, by which means two, three, or four shoots will exhaust the greater part of the nourishment of the trees all the summer, which shoots, at the winter pruning, are entirely cut out, so that the strength of the trees is employed only in nourishing useless branches, and they are thereby rendered so weak as not to be able to preserve themselves; but should the weakness of the trees proceed from a fixed distemper it is the better way to remove them at first; and after renewing the earth, plant new ones in their places; for

if the soil be a hot burning gravel or sand in which your peach trees are planted, you will generally find this to be the case after their roots have got beyond the earth of your border, for which reason it is much more advisable to dig them up and plant fresh ones.—(*Par. Hort. Reg.*)

Taylor's Early Forty-fold Potatoes.—This most excellent variety of the potatoe bids fair to come into general cultivation for an early crop. It was first raised in this vicinity last season from seed which was imported from England. We had intended to have noticed it more particularly before, but so many other things have occupied our attention, that we have forgotten to do so. In the *Third Report of Drummond's Agricultural Museum*, a work which is published from time to time, as the quantity of matter becomes accumulated, is an account of this variety of potato. The produce from one pound, is stated at *sixty-five* pounds; the soil light and stable manure. It is, also, stated to be very mealy, of excellent flavor, and well adapted for the market. We have also tested the quality of this kind ourselves, having eaten of some that were produced in our garden; and we can truly say, without exaggeration, that it is superior to any we have ever known. We cannot too strongly recommend it to public favor.—*Conds.*

ART. IV. *Massachusetts Horticultural Society.*

Saturday, March 26th.—Exhibited. From R. Manning, Ribston Pippins. A seedling apple from the Rev. Mr. Punchard, Plymouth. From the garden of the late S. Hastings, Boston, a seedling apple.

April 2d. This meeting was held partly to take into consideration the necessity of procuring a room for the use of the society, their former one having been destroyed by the late fire. The room will, however, be completed in course of a week or two, into which they will probably return. Some committees were chosen to make suitable arrangements for the exhibitions of fruits and flowers.

Read. A letter from the BARON VON LUDWIG, of Cape Town, at the Cape of Good Hope.

Presented. A package of seeds and a large collection of bulbs from the Baron Ludwig.

April 9th.—Read. A letter from B. Maund, Esq., of Broomsgrove, England.

Presented. A copy of the *Botanic Garden*, a work published by B. Maund, Esq., and presented to the society by him.

April 16th.—Exhibited. From J. A. Kenrick, received from Dr. J. Burnett, of Southborough, from the farm of Webster Johnson, a handsome seedling apple. From Dr. O. Fiske, Worcester, Easter Beurré pears, in a very fine state. From R. Manning, Pennocks red winter and Wellington apples. From Wm. Oliver, l'Echasserie of *Duhamel* (Ambrette of *Cox*) in fine eating.

Distributed. Scions of a seedling pear, from Gen. J. Wingate, of Portland. These were accompanied by a letter.

ART. V. Quincy Market.

<i>Roots, Tubers, &c.</i>		From	To	<i>Squashes and Pumpkins.</i>		From	To
		\$ cts.	\$ cts.			\$ cts.	\$ cts.
Potatoes :				Canada crookneck, per cwt., ...	none.		
Common, { per barrel,	1 00	1 25		West India, per cwt.	3 00	4 00	
	37½	50		Common crookneck, per cwt.	4 00	5 00	
Chenangoes, { per barrel,	1 25	1 50		Lima, per cwt.	4 00		
	50	62½		Palermo Squash, per pound,	6		
Eastport, { per barrel,	2 00	2 50		Pumpkins, each,	12½	25	
	1 00						
N'a Scotia, { per barrel,	1 50	1 75		<i>Pot and Sweet Herbs.</i>			
	50	60		Parsley, per half peck,	37½	50	
Turnips :				Sage, per pound,	17	20	
Common, { per barrel,	50	75		Marjoram, per bunch,	6	12	
	25	37½		Savory,	6	12	
Yellow French, per barrel, ...	1 00	1 25		Spearmint,	6		
Onions :				<i>Fruits.</i>			
Common, { per barrel,	2 50	3 00		Apples, dessert :			
	1 00	1 25		Common, { per barrel,	2 00	2 25	
	5	6			75	1 00	
White, per bunch,	6			Baldwin, { per barrel,	2 50	3 00	
Beets, per bushel,	75	1 00			1 00	1 50	
Carrots, per bushel,	75	1 00		Russels, { per barrel,	2 00	2 50	
Parsnips, per bushel,	50	75			87	1 00	
Salsify, per bunch,	12½			Pears :			
Horseradish, per pound,	6	10		Winter, { per barrel,	none.		
Shallots, per pound,	20				75		
Garlic, per pound,	14			Cucumbers, each,	20	25	
<i>Cabbages, Salads, &c.</i>				Quinces, per bushel,	none.		
Cabbages : per dozen.				Pine Apples,	20	25	
Savoy,	1 00	1 50		Grapes :			
Drumhead,	1 00	1 50		Malaga, per pound,	37½	50	
Red,	1 00	1 50		Cranberries, per barrel,	7 00	9 00	
Brocoli, each,	none.				2 50	3 00	
Cauliflower, each,	"			— per bushel,	2 25	2 75	
Celery, per root,	10	25		Oranges, { per dozen,	25	37½	
Lettuce, per head,	4	6			2 25	2 50	
Radishes, per bunch,	6	8		Lemons, { per box,	2 25	2 50	
Spinach, per peck,	20				1 00	1 25	
Dandelions, per peck,	17	20		Chestnuts, { per barrel,	none.		
Asparagus, per bunch,	20	25			"		
Scythos, per bunch,	3	6		Walnuts, { per barrel,	4 00	4 50	
Rhubarb, per pound,	12½				1 75	2 00	
				Almonds, per pound,	12	14	
				Filberts, per pound,	4	6	

REMARKS. The spring stock of market produce, generally, is not very large, and, excepting some kinds, will hardly be sufficient to last until the new crops come in. Potatoes have lately arrived in abundance from the Eastward; from Nova Scotia very large supplies have been received, and of good quality. The late cold weather having prevented early shipments, great quantities were sent off as soon as danger of frost was over. Onions are exceedingly scarce, and although in our last we mentioned bunched ones as plenty, there are now few to be had. Beets and carrots are in more demand, and prices advanced. Parsnips are more plentiful. A few bunches of salsify have been brought in since the ground opened, and sold readily. Cabbages are scarce, good ones selling at very high prices. Lettuce is now plentiful, and of fine quality. Radishes are now abundant. Dandelions come to hand in large quantities. Some asparagus was brought in this week, which was quickly taken. A few pounds of rhubarb, for tarts, came to hand this week; it was cut from that very early, new, and most excellent kind, *Wilnot's Early Scarlet*, which is at least ten days earlier than the old variety, and also of superior quality; it should be cultivated exclusively for the market. Squashes of all kinds, except the West India, are about gone; occasionally one or two may be found, but they are not sufficiently plenty to

quote prices. Arrivals of squashes from the West Indies, have been very large, and the quantity in the market abundant.

Of apples, the stock has become greatly reduced; prime quality of Baldwins command the prices in quotations. Russets are considerably higher. Some few pears remain on hand. Cucumbers have come to hand the past week of very good quality, and are now tolerably plenty for the season. Pine-apples are not yet very good, owing to the coolness of the season; the quantity yet arrived is small. Cranberries of last fall's picking, remain the same as in our last; those of this spring's picking, very fresh and prime, command higher prices. Lemons and oranges remain the same. Chestnuts are done for this season. *Yours, M. T., Boston, April, 1836.*

ART. VI. *Meteorological Notices.*

THE month of March was, throughout, rather cold. The snow remained upon the ground to considerable depth. But little fell during the month. The prevailing winds were southerly. The weather, with the exception of the cold, was very fine.

THERMOMETER.—Mean temperature, $29^{\circ} 10'$ —highest 47° ; lowest 4° above zero.

WINDS.—N. one day—N. E. one—E. four—S. eight—S. W. seven—W. four—N. W. two days.

Force of the Wind.—Brisk, eight days—light, twenty-three days.

Character of the Weather.—FINE, thirteen days—FAIR, twelve days—CLOUDY, six days.

Rainy, three days—Snowy, one day.

MONTHLY CALENDAR

OF

HORTICULTURE AND FLORICULTURE,

FOR MAY.

FRUIT DEPARTMENT.

Grape vines, in the green-house or grapery, will now require much attention. Keep them trimmed of all superfluous shoots, and take off laterals, at the first bud, as soon as they make their appearance. If the fruit is completely set, the vines should be syringed twice a week; but if they are still in flower, this operation should not be performed. Se-

lect good, strong, new shoots and encourage them as much as possible for bearing wood for next season. Vines in the open air will be now breaking their buds. Such as were not pruned last fall may now have their shoots shortened. Many cultivators think that vines should on no account be pruned in the spring, as the bleeding from the wounds is extremely injurious; others hold to the contrary opinion, and recommend spring pruning for the Isabella, Catawba and other America varieties. We have tried both and never could perceive any difference in the health of the vines.

Grape Eyes put in as recommended in February and March, may now be taken out of the hot-bed and hardened to the temperature of the open air; those that have grown very vigorously should be shifted into large pots.

Plantations of Strawberries may yet be made. If dry weather should succeed, the plants will require watering. Beds which are in full bearing should have hay or straw laid between the rows to keep the fruit from being beaten into the ground by the heavy rains.

Newly planted trees should be mulched with coarse strawy manure, and, if large, tied to strong stakes to prevent their being injured by high winds.

FLOWER DEPARTMENT.

Tulip beds should be shaded from the hot sun to prevent the flowers from being destroyed.

Ranunculuses should be protected against the hot rays of the sun, which almost immediately burn up the dark colored flowers.

Polyanthuses will now be in full bloom; as soon as these flowers have faded, the root should be separated to increase the collection.

Tigerflowers may now be planted in the open border, where they will produce much finer flowers than when planted in pots.

Gladiolus natalensis should now be planted in the open border; make the soil light and rich, or their spikes of flowers will be small and few in number.

Chrysanthemums should now be increased by dividing the roots. Place the young plants in a shady situation for a few days till well rooted.

Cuttings of Salvias may still be put in.

Dahlias may be planted the latter part of the month, if the weather is warm. Nothing is gained by putting them into the ground early in the season, as they will not make much progress until the ground becomes warm. For directions, see our first volume. In our succeeding number some excellent remarks will be found by Mr. Walker.

Annual flower seeds should be all sown this month, if possible. Particular pains should be taken to make the soil *very fine*. It is from this cause alone that many seeds do not vegetate, and the fault is laid to the seedsman. The soil should also be watered if dry weather ensues.

Cuttings of Geraniums and other green-house plants should be put in the latter part of this month.

Camellias. Where camellias are kept in rooms, the plants should, as soon as the weather will allow, be placed in the open air in a shady situation, and syringed every other day. After being confined to the dry air of a room all winter, the sooner they are out the better. Plants in green-houses should be shaded from the mid-day sun, and also syringed two or three times a week. Inarching the plants may yet be performed.

THE
AMERICAN
GARDENER'S MAGAZINE.

JUNE, 1836.

ORIGINAL COMMUNICATIONS.

ART. I. *Some Account of the Camellia House and Stove, accompanied with Engravings, lately erected at Hawthorn Grove, Dorchester, the Residence of M. P. Wilder, Esq.* By the CONDUCTORS.

THE green-house which formerly occupied the spot upon which the camellia house and stove, lately erected, stand, was very old, and almost totally unfit for the purposes for which it was intended, The wood-work was much decayed, and the sashes, which were glazed with glass nearly a quarter of an inch in thickness, were in a very bad condition. Under these circumstances, and the collection of plants continually increasing, Mr. Wilder contemplated the erection of a magnificent range of houses upon a different spot, adjacent to his dwelling, and which, for many reasons, gave it a great preference over the one where the present new one is built. But from some disappointment in the procuring of a suitable person to superintend the work, and the season having far advanced, and there being some danger that the range would not be sufficiently completed to insure the safety of the plants before the setting in of cold weather, this idea was abandoned for the present, and the one fitted up of which we are about to describe. We believe it is Mr. Wilder's intention to carry his contemplated projections into effect as soon as circumstances will allow ; but this one will answer all purposes for a few years, when, if the other houses are erected, it will be made into a forcing house, and divided into compartments, to include a peachery, grapery, and, perhaps, a pinery. We hope that all this will be done, and we are happy in being the medium, by his permission, of communicating the improvements which have thus far been made to the public.

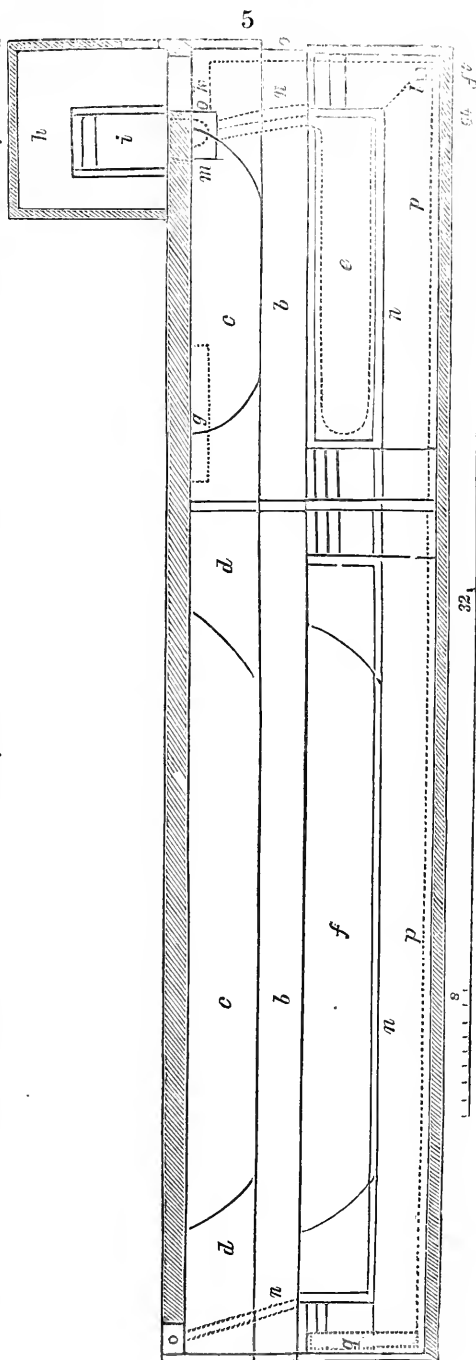
The position of the new range is precisely the same of the old one, and the entrance to it is in nearly the same place; the back wall of the old one was built of stone against a high bank, which rises from the north side of the garden. This wall was continued on in a direct line to the length required, and the position being the same, the old part of the wall answered every purpose of a new one. The height not being great enough, it was carried up with brick work as far as required. The stone work answers as well as brick; and, in the country where bricks are not to be easily procured, we would suggest the erection of back walls with stone, especially when built against a bank. In the construction of the house, as regards light, air, heat, and convenience, every attention has been given. The location is well drained, and pains taken that the house should be as free as possible from all dampness. The facilities for water, which are too often neglected, are very good. The consumption of fuel is very moderate for the size of the house, and the method of heating, which will be particularly described, most excellent. The angle of the roof is greater than is usually given, and, although more than it need be, on some accounts is much better for carrying off water, and prevents the continual dripping which occurs in houses with flatter roofs, especially when poorly glazed. In the arrangement of the interior, the health of the plants has been the first object in view.

The dimensions of the range (*figs. 5 and 6*) are as follows:—whole length, eighty-two feet; width, measuring inside, sixteen feet; height of the back wall, eighteen feet; of the front one, six feet, including the sashes. Both ends of the range are glass. The stove, which is separated from the conservatory or camellia house by a glass partition, and through which visitors pass, the entrance from the garden being at that end of the range, occupies twenty-eight feet; thus leaving the length of the former fifty-four feet. The entrance door (*a*), is thirty-eight inches wide and six feet high; the main walk (*b b*), through the range, runs from this to the other end, where a sliding door is made, to open in the summer season, which is of the same width as the door, and is covered with handsome marble tile; the door between the conservatory and stove slides instead of opening. In both compartments are stages for plants (*c c*), which contain seven shelves each, of about eight inches in width. At each end of the stage in the conservatory are spaces (*d d*), covered with trellis work, which are intended for placing on large specimens of plants that cannot be set upon the stage; these are about eight feet in length, and of the same width of the stage. In the stove is a similar space, but much smaller.

In the stove is a pit for plunging in such plants as require bottom heat to make them flourish well, and also for many uses in stove propagation. This pit is twenty-two feet long and four and a half wide; the back wall is about two feet four inches high

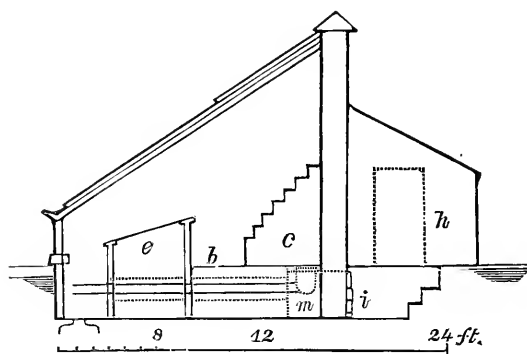
above the centre walk, and about five and a half feet above the front one. The walls are built of brick and are covered with a plank coping. The passage ways at each end of the house from the centre to the front walk, are about three feet wide, and are descended by three steps; those each side of the partition are descended by two on to a large flag-stone, level with the top of the flue, and one from that to the walk.

In the conservatory there is a front stage of the same length of the back one; at each end of this, also, corresponding with the back one, are spaces covered with lattice work, for middling sized plants to stand, to break the abrupt appearance of the ends of the stage. Over the hot-water pipes, which run along parallel with the front wall, and immediately adjoining the side of the front sill, is a box (as seen in the section, *fig. 6*), about eight inches wide and six deep, for the purpose of laying in



the shoots of grape vines during the winter season when not in a growing state. This is an excellent plan where vines are intro-

6



duced into a green-house, as it serves for a shelf, during the winter, for many small plants, and, as the shoots of the vines are not seen, the house has a very neat appearance. But we very much doubt the utility of introducing vines where a fine collection of plants are grown; both vines and plants are injured; the former producing small crops, and the latter becoming sickly from confined air and shade; both cannot be cultivated in a healthy state together. The practice of introducing vines into green-houses in this vicinity has become so general that we cannot refrain from making these remarks here, although a digression from our subject, and we sincerely hope that those persons who are desirous of cultivating this delicious fruit, will erect houses for their growth exclusively, and not destroy the beauty and health of choice collections of plants for the purpose of raising a few clusters of grapes. We trust that Mr. Wilder will not do so to the injury of his excellent collection. Under the stage in the stove is a cistern (*e*), into which water is introduced for the purpose of watering the plants. It is about twelve feet long, two feet wide, and three deep.

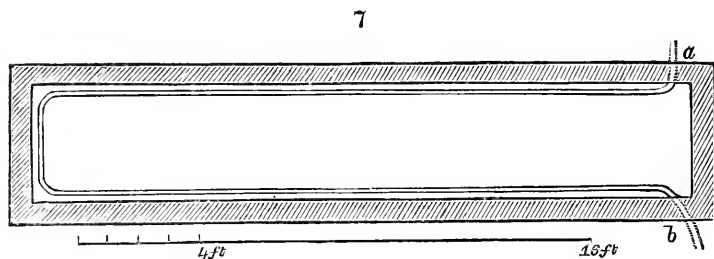
The back shed (*h*), is eleven feet wide and ten feet long, and of sufficient height to allow for the convenience of potting plants and other uses. The fire hole (*i*) is about four feet square and three and a half deep, which gives plenty of room for kindling fires. This shed communicates with the stove by a door. In the stove is a pump (*k*), for filling the cistern and the boiler, the water being brought by a pipe from a cistern outside of the house, large enough to contain sixteen hundred gallons. A ciss-pool (*l*), at the corner of the stove, drains off all water from every part of the range.

The furnace (*m*), is three feet high and three deep, and about two and a half in width. The furnace door is twelve wide and thirteen high, and the ash door twelve wide and seven high. The flue (*n n*), which is represented in part by the dotted lines, runs from the furnace across, underneath the walk, to the pit, and forming one end of that, is carried along, making one side of the walk and the front of the pit, to the other end of the conservatory, and again running across, underneath the walk, is carried into the chimney (*o*), in the back wall. The flue is built twelve inches high inside, and eight inches in width, and is covered with twelve inch tile; at the corner of the pit, and at the opposite corner of the conservatory, are openings to the flue, fitted with soapstone doors, for the purpose of cleaning it out when foul. The boiler is set in the furnace, and will contain sixteen gallons; the pipes (*p p*) are four inches in diameter, and run, as represented by the dotted lines, to the corner of the stove; from thence across the front to the reservoir (*q*), at the corner of the conservatory. The reservoir is six feet long, fourteen inches high and thirteen wide; the pipes run through it, and are fitted with a stop-cock, so that the heat can be raised before all the water is warmed in the reservoir. To be sure of a sufficient command of heat in the stove, a steam apparatus is combined with the hot water system. A steam pipe, about an inch in diameter, is fitted into the boiler, and from thence runs round the bottom of the pit, as seen by dotted lines, heating a bed of stones, which warms the soil above, and the condensed water runs into the ciss-pool. This, Mr. Wilder states, he has found very useful, in severe cold weather, in keeping up an equal temperature in the soil. Some further remarks on the construction of the steam apparatus, together with a plan, will be made before closing this article.

The length of the lower roof-sashes is twelve feet; that of the upper ones, seven feet; and the height of the front ones two feet; the width of each, three feet two inches. They are all glazed with four rows of six-by-eight glass, with laps from a quarter to a half an inch. The under side of the sash rails are rounded off instead of being bevelled, as is usually done; which has a lighter appearance. The work, generally, is made with a regard to as much light as possible.

Having thus given the dimensions as accurately as our minutes will allow, some remarks upon the management of the steam apparatus remain to be noticed. The object of the steam pipe has been before stated; it cannot be used, however, at the same time that the hot water circulates from the boiler. To obviate this, stop-cocks are fitted into the hot water pipes about a foot from the boiler; more fire is then added to produce steam, which is carried off by the pipe, heating in its course the stones, &c., in the pit. The hot water pipes just inside of the conservatory, where they

enter from the stove, have, also, stop-cocks fitted in, so that the latter may be warmed to a greater degree than the former. To illustrate more planly the course of the steam pipe, which, Mr. Wilder states, is of great use and works with perfect safety, we have annexed the following plan. The pipe runs from the boiler



underneath the walk into the back of the pit (*fig. 7, a*), and continues round to the same end of the pit, and is carried out at the opposite corner (*b*) into the ciss-pool. The pit is built and filled up in the following manner:—the bottom was first paved with bricks, inclining it towards the front, where a drain, formed by leaving out one row, carries off all water; the steam pipe is laid on this; above are nearly three feet of stones, and on them the soil to the depth of two and a half feet. Rotten bark or leaves may constitute part of the soil with which the pit is fitted up. The construction of the furnace, boiler, &c., is so similar to that in Mr. Sweetser's greenhouse, of which a plan was given in our January number, p. 26, that there is no necessity of annexing an engraving.

The back wall of the range is coped with plank, and the upper sashes slide underneath two or three inches; to prevent the rain from driving in, a lead lap is nailed on the whole length. The upper sashes, only every third one of which is movable, are fitted with weights and pulleys and can be opened or closed with ease. In the interior of the range we noticed one thing which is an improvement upon green-houses in general; the front and ends of both back stages, and the back and ends of the front one, in the conservatory, are covered with lattice work, formed of laths nailed on in one direction, about half an inch apart; this prevents persons who are walking through the house, from seeing directly under the stages, and has a very neat and clean appearance. The arrangements of the back shed are such as give the greatest facility for the work that is to be done.

Some estimate of the consumption of fuel through the winter season, and a few other particulars we intended to have added, but not having been able to procure the memoranda for the purpose, we leave them until another opportunity. We have been promised any information in regard to the management of the house and

stove, which, if it is new, or worthy of note, we shall lay before our readers. We would call the attention of gentlemen who are building green-houses to the annexed plans and descriptions. They are, we believe, as intelligible as it is possible to make such ; and, sufficiently so, we hope, to enable any person to construct one in a similar manner. To enumerate all the little items about such a building would occupy too much space. We have, however, added a great many, with the intention of making it perfectly understood.

ART. II. *On the Cultivation of the Plum, with some Remarks upon Grafting on Peach Stocks.* By S. POND.

HAVING frequently been called upon to state some reasons why the plum trees in my garden are so much more healthy and vigorous than trees in general, and so much more free from all kinds of insects which infest these trees in great numbers in many other places, I send you the following remarks, which, perhaps, if they contain nothing very new, may be of benefit to some of your readers, and, at least, call attention to the subject.

In the neighborhood in which I reside, the plum trees, in the various gardens, have been declining in vigor and health for many years, and where, formerly, bushels of fine fruit, though of the more common kinds, were raised, now scarcely enough is produced to remunerate for the labor of picking ; indeed, a large part of the trees have decayed and been rooted up by the proprietors ; some few young trees have been set out ; but many of these have shared the same fate of the old ones ; the same insects and the same disease, if such it is that destroys the trees, from inattention, having been allowed to spread to such a great degree as to defy all attempts to save them.

The first object in planting plum trees is, to select fine, healthy, handsomely formed ones, about two or three years, from the bud or graft, and worked upon their own stools ; be careful, in transplanting, to cut the roots as little as possible. The soil of my garden where the trees are planted, is deep and rich and quite moist, and I find that they bear fruit much more abundantly in such than in a lighter one. The situation is very low, so much so that, about four or five years since, in the month of March, the salt water, from the unusual height of the tide that season, overflowed the

whole of it to the depth of fifteen or twenty inches. At the time, I had a fine lot of cherry and peach trees which were covered with flower buds; but as soon as the warm weather of spring came on they soon gave signs of decay, and, before the close of summer, were all nearly or quite dead. Grapes, strawberries, &c., shared the same fate.* I was much surprised, however, to notice the vigor of the plum trees that season; they made uncommonly large shoots; and the foliage was of a dark green and most vigorous growth; they seemed, in fact, to have taken a new start, and they have ever since continued to grow with the same strength, bearing full crops every season, more particularly the last. The bark is smooth and free from all *excrecences* of any kind; and the fine appearance they have is entirely different from any other I have seen.

Plum trees I have found are kept in better health and a more vigorous state, by setting their roots somewhat higher in the soil than most other trees. In planting I have set them at the distance of about twenty feet apart. In pruning, considerable care is requisite, and the branches should not be cut indiscriminately as is often done by many persons, taking out a branch here and there, and leaving the tree without any shape; in the first place, very few large limbs should be taken off at all; all trimming should be performed on the young wood, and the judicious pruner must look ahead a year or two if he would excel in the cultivation of the plum. Cut out the branches in the middle of the tree and keep it open, so that the air and sun can penetrate freely to the fruit. In the month of July, part of the new shoots should be rubbed off with the fingers, and the others headed down so as to make them throw out laterals upon which the greatest quantity of fruit is produced; keep the branches well shortened, and every year, in the month of July, go over the trees and rub off and cut away as above directed. By this course of culture the trees will be more dwarf in their growth, and the branches, being kept thin of wood, will produce a much larger quantity of fruit.

The grafting of the plum on peach stocks has lately prevailed to a considerable extent with nurserymen, and many trees have been spread about the country grown in this manner. A few years since, I visited many of the nurseries near the city of New York, and purchased from one or two a large number of plum trees. I did not know, at the time, that they were on the peach stock; but when I received the trees and commenced setting them out, I immediately perceived what they were. They were planted with the same care that all my other trees were, and during summer they made a vig-

* Residing in the same neighborhood, and very near Mr. Pond, our garden suffered in a like degree with his. Many of our trees were injured, and strawberries and many other small plants totally destroyed. The plum trees were, however, all the more vigorous.—*Conds.*

orous and strong growth, and I began to think that they would answer a better purpose than those on their own bottoms. But, by the next spring, they presented a different appearance; many of them had begun to decay at the root and gradually they became less and less vigorous until autumn, when some of them showed signs of immediate death. The succeeding winter the cold was rather severe, and towards spring, at the season for swelling their buds, but few of the trees showed any signs of vegetation. I took the soil away at the roots, and there found what a moment's reflection would have convinced me I should. The stocks just below where they were grafted were completely covered with gum; and the *borer*, which seldom touches the plum, had made sad ravages. I soon determined to root them up, and also came to the conclusion never to plant a plum tree, grafted on a peach, again.

The only advantage that I have ever heard advanced in favor of peach stocks is, that the plums grown more vigorously and consequently come into a bearing state at an earlier period than when on their own bottoms; every body knows how short-lived the peach tree is in our climate; how subject to gum, canker, and other diseases; and to graft a tree, so hardy as is the plum, upon it, seems too absurd for belief. Gaining a year or so in procuring fruit, if indeed this is the fact, which I am inclined to doubt,—is very little in comparison with the loss of the tree after three or four years of care and expense in bringing it into a bearing state. But with all these obvious facts before the public, hundreds of trees, worked upon the peach, are yearly sold and planted. One great object in grafting or budding upon the peach, is the facility with which the scions or buds take, while the plum stock is extremely difficult, and often one half or more of them do not grow at all. Plum stocks are also not easily to be procured of size large enough for grafting, as they require to be three years old, while the peach requires but one. The demand for plum trees having been very great, is probably one reason why more peach stocks have been used; but the purchaser should always be informed when such is the fact. I would never plant a plum tree upon my grounds again unless it was budded or grafted on its own kind.

Among the many kinds of plums with which our catalogues abound, the following I can recommend as excellent, having fruited them successively for two or three years:—

White or yellow fruited.

White Gage,
Bingham,
Coe's Golden Drop.

Purple fruited.

Royal de Tours,
Duane's Purple,
Smith's Orleans,
Semiana,
Seedling.

These are all constant bearers, and of large size, beautiful appearance, and fine flavor. The old Green Gage, with me, is a shy

bearer. Cores' Field Marshal has not yet come into bearing, but it promises well, and is a very vigorous and hardy kind. Bolmar's Washington has not yet produced much in my garden, although the trees are quite large, and have flowered every season. Of the above list, the Royal de Tours is quite early, and the Semiana a very late plum, in eating from the middle of October to the middle of November. Some trees, only two years from the graft, produced twenty or thirty plums last season. At the season it ripens, there is but little other fruit, and on this account it is a very valuable sort.

There are some insects which attack the plum, and, in some districts, destroy the whole crop of fruit. But as I have never been troubled to any great extent, I can say but little about them. The *curculio* I have seen on the trees sometimes, and I am very particular to have *every* fruit picked up *as soon as it falls from the tree*. By this means the insect has been prevented from spreading, while in gardens almost adjoining, they have destroyed the crop for several years. The black excrescence which appears on the branches, I have also, as yet, seen but a few times ; and this I immediately cut away. I have no doubt but it is caused by an insect, although some cultivators attribute it to disease arising from the soil and situation. I have always given great attention to the cultivation of the plum, and have found no trouble in procuring fruit ; and if the same care is given by other persons, I see no reason why plums should not be as plenty as any other fruit.

Yours,

Cambridgeport, April 4, 1835.

S. POND.

ART. III. *Rural Scenery : The Thatched Cottage.* By JUNIUS.

THERE are but few objects in landscape scenery that form a more *rural* characteristic than "the thatched cottage," by the side of a wood, which serves to protect it from the cold winter blast, and has the effect of a shady retreat for summer. To impart to the traveller pleasing ideas of the fertility and domestic comforts, blended with rural economy, of the country through which he passes, is, perhaps, one of the very best criterions of his opinion of the more rapid improvement and increase of the value of property ; and the 'cot' spoken of is one of the sure features to attract his particular attention.

There is something about a thatched cottage which is always inviting, and reminds us of the comforts of life. I disagree with Dr. Johnson, who deems all things of a rustic nature, as the abode and choice of the unrefined; or, in plain words, expressive of rudeness in every degree.

I very much doubt if the greatest monarch is more intelligent, oftentimes, than those who dwell beneath a cottage of thatch; nor are his domestic comforts any more elevated or constant than the cottager, although fame extends his name to a more distant part, where rumor often falsifies his real character. The cottager rarely has any thing to fear on this subject, as his only object is to make *home* agreeable to himself and its inmates; and this effect being observable to the passer by, it engraves on his memory the *snug* appearance of the thatched cottage.

Snugness is not altogether the only feature displayed in such dwellings, but there is a character of retirement, blended with hospitality. By general observation, it will be seen that the sites of such dwellings are well chosen where the requisite comforts for domestic purposes are of easy access. Shelter and shade are the first consideration in this case, and are a grand feature, namely, the fine impression given on landscape scenery. The rustic construction of the cot is always pleasing when we can see natural materials in every way made useful, and not too much transposed into something, of which all recollection of its primitive state is lost, to appearance. The thatch, being of straw, reminds us of the utility it has been in another way—when the bearer of grain; and the rude unhewn post of the porch (on which twines the honeysuckle) of the use of forest trees. The plan of the cot is mostly neat, and generally in the Gothic order, with the upper windows peeping out of the thatch. The approaches and appendages are always corresponding. The rustic arbor well covered with native grape vines that give a natural effect, and impart a luscious reward to the humble pruner. The approach is generally converted into a neat and well kept flower-garden, which gives a healthy employment, or rather recreation, to an aged mother or some rosy cheeked prattling children, who are often seen strolling from their plot in quest of flowers to decorate the little parterre, transplanting them with care to their new habitations among, perhaps, some delicate exotics.

The vegetable garden, well filled with esculent vegetables and fruit, with a small orchard and meadow, are often appendages to the “thatched cottage.” A running stream or brook in its vicinity gives a mellowness to the scene, and some rich verdant spots near the dwelling forms a part, of social effect, but seldom rivalled in landscape scenery.

Were I to choose a dwelling for retirement, when age wears off that activity and zeal from a life of bustle and business, it should be the

cot above spoken of; not, gentle reader, that I would be conspicuous at that time of life, but because it would suit my desire. The wood would be a pleasing source for my researches of botanical specimens of native plants, and the trees and shrubs about my dwelling a fine retreat for the different kinds of birds which would visit my 'cot,' as their different migrations suit their approach in the neighboring wood. The honeysuckle would impart, in the flowering season, a luscious repast to the little queen of birds—the humming-bird; and my flower-garden would serve to amuse my leisure hours in healthy employment. The fruit, raised by my care, would add to its flavor, and some to give to a friend, to friendship. A few choice books for my amusement, and to recall what had been seen and done in horticulture; and, at times, to read to relatives and friends, who should always find hospitality in my rustic manners, and the welcome repast of the wearied traveller, sums up my desire of a thatched cottage.

New Jersey, April, 1836.

JUNIUS.

ART. IV. *On the Cultivation of Ranunculuses in Pots.* By
S. SWEETSER.

HAVING been very successful in flowering ranunculuses in pots the past winter, and having, also, often been asked what course I pursued to bloom them so well, I send you a few hasty remarks, which, if you think they are of sufficient importance to be of any benefit to your readers, you are at liberty to use them as you please.

For two or three years I have planted ranunculuses in pots or boxes, but have never succeeded in procuring but few flowers, and those very inferior. The roots that were planted were large and strong, and the soil such as is generally recommended for them to be grown in. Being a favorite flower with me, I could not be induced to give them up without further trial. In all the directions that I have ever read for planting ranunculuses, shallow pots or boxes have been recommended; but as in these they did not flourish, I came to the conclusion that the little soil that was generally allowed for them to grow in, was not sufficient for the purpose. In planting beds, it is particularly stated that the soil should be loosened to the depth of *eighteen or twenty inches*, as their roots run to a considerable length; from this hint, and from

the fact that bulbous roots like a deep pot to produce large and full formed flowers, I selected several hyacinth pots, which are made about ten inches deep and six wide at the top. In these the roots were planted early in the month of January in a good compost mixed together in nearly the following proportions :—one half good fresh loam and the other half old hot-bed manure.

After they were set out they received a good watering, and the pots were placed away in front of the green-house, underneath the hot-water pipes, where they received but little light ; in the course of three weeks or a month the shoots began to make their appearance above the soil, and the pots were then removed on to a shelf above the pipes, where they could have the benefit of the light of both the roof and front sashes. They here made a vigorous growth, producing fine large green leaves, and throwing up in the course of a month, flower buds exceedingly stocky and strong ; in some of the pots I counted upwards of twelve. From the time they were placed upon the shelf they received large quantities of water and one or two of the front sashes, against which they stood, in all mild weather, were opened to prevent the plants from being drawn up. With only this attention they continued to advance their flower stems until April, when they blossomed finely, and presented a most beautiful display ; some of the stems were more than a foot in height, and proportionably strong ; many who saw them were astonished at their vigor. After their flowers had fallen, the roots were turned out, as, when forced, they are not worth growing afterwards.

At the time the roots were planted, two of the pots were immediately removed to a small house, which was kept to the temperature of about 60°, and placed upon a stage in rather a shady situation ; they soon began to grow, and were considerably in advance of the others in the green-house ; but the foliage was not so large, nor the flower stems so numerous, tall, or strong ; the color of the flowers was also less brilliant, and they continued in beauty a less length of time. Like hyacinths and other bulbs, they require to be planted and kept away from heat and light until the roots have struck deep into the soil, so as to afford nourishment as soon as they are brought into these elements again ; separate from the depth of soil in the pots, I attribute the strong growth of the plants to the long time they were allowed to remain underneath the front stage unexposed to the light. Should these few remarks be the means of extending the cultivation of this beautiful plant in pots, I shall feel much gratified ; and, at the same time, it would give me much pleasure to hear, from some of your correspondents, the best mode of growing them in beds in the open garden.

Yours,

Cambridgeport, April 23, 1836.

S. SWEETSER.

ART. V. *Some Remarks on the Cultivation of the Genus Calceolaria.* By the CONDUCTORS.

THIS truly splendid genus of plants does not seem to be so generally and extensively cultivated as it deserves to; two or three species have been grown in collections for several years; but very little effort has been made, if we except a few individuals, to introduce many of the magnificent hybrids which have been produced by English amateurs and cultivators within the last three or four years; nor have any attempts, that we are aware of, been made, until the last season, to raise new varieties by seeds in our gardens.

The species are mostly natives of Chili and Peru; one only, *C. Fothergilli*, having been found upon the Falkland Islands. *C. pinnata* and *Fothergilli* were introduced to England as early as 1777, but none of the other species until 1822; when *C. rugosa*, *integrifolia*, and one or two others, were added. They are all beautiful, though *C. pinnata* is a small annual species. *C. rugosa* and *integrifolia*, common in our green-houses, are among the most brilliant of the shrubby species. *C. corymbosa*, a fine herbaceous species, is the parent of many of the finest varieties.

Within a few years, hundreds of varieties have been raised by intermixture of the different species; and they will, no doubt, soon become as numerous as the much admired dahlia or geranium, and the desire to possess new kinds seems, also, to be nearly as great. It was not until the introduction of a purple species, *C. purpurea*, in 1827, that any variation took place in the color of the flowers; the previously introduced ones being yellow, of course no other shade was produced until the impregnation of the former with the latter. At the present time, however, plants are to be found of almost every tint, from the palest yellow to deep orange, and from light red to bright scarlet, as also, two or three of these shades distinct in the same flower. Various fanciful names have been given to the different varieties, that they may be more easily distinguished, and to serve as a guide for the amateur or gentleman to select from the nurseryman kinds, which, by their name and beauty, have become known as possessing extraordinary splendor.

Calceolarias are extremely difficult to import, and hence we must look to our own gardens for an increase of fine varieties. With the two colors of the different species, purple and yellow, which are now in our gardens, we can as easily produce fine seedlings as our English neighbors; no uncommon care is requisite, and, as they soon show what they are, the cultivator need possess but a small share of patience. The second season after sowing the seed, the plants flower, and such as are worthy of preserving should be named, and the others thrown away. It would not be judicious

to save a kind of which there already exists several superior ones.

We have now in fine bloom several plants which we raised from seeds sown last season. Having succeeded tolerably well in our mode of culture, a few remarks we have thought would not be unappropriate at this time, and, perhaps, call more attention to this fine family. Seeds are procured from any of the species or varieties by dusting the pollen on the stigma at the time they are in bloom. Two distinct colors impregnated together would be more likely to produce beautiful new kinds than two very similar ones. When the seed is ripe, it should be immediately sown in pots, filled with a compost of sandy loam and leaf mould broken up very fine or sifted. The seeds are exceedingly small and will not vegetate in a coarse soil. Cover them very thinly with the compost, barely sufficient to permit the sun and air from drying the seeds too much, and place the pot in a rather shady place, and keep it well watered; giving, however, but little at a time through a watering pot with a *very* fine rose, or else the seeds will be all washed away. In the course of three weeks or a month, the young plants will make their appearance above the soil. When they have two rough leaves, they should be potted off into small pots (number one's) in the same compost in which the seeds were sown, and placed away in a shady situation. It frequently happens that all the seeds do not come up at one time; when this is the case, the largest plants should be taken out very carefully with a small sharp pointed stick or with a knife, so as not to disturb the soil more than possible; in this way proceed until all the plants which may appear during the summer, are potted off. During the season no particular care is necessary but to keep them duly watered and shaded partially from the sun; they should also be placed where the worms cannot enter the pots.

Upon the approach of cold weather they should be removed into the green-house with the other plants. Place them upon a dry shelf, where they will receive the benefit of the light and air, as they are impatient of a confined atmosphere; water them occasionally as they may require, which, in the winter season, is generally about twice a week; if any of the plants, which were first potted, have grown to a tolerably strong size when they are put into the green-house, they should be shifted into number two pots. No other care is requisite until they begin to grow in the month of February or March.

As soon as the plants show signs of growing, in the spring, they should be frequently looked at and supplied more freely with water. A compost should also then be prepared to repot the plants in; for this purpose, one similar to that recommended for sowing the seeds in, but richer will do very well for the herbaceous kinds, and may be mixed together as follows:—one half well decomposed hot-bed

manure, one quarter light loam, and one quarter composed of leaf-mould and sand, in equal parts. Making use of this soil, the plants should be repotted as often as they require it, until they begin to open their blossoms, the final shifting being generally into number six pots, or those measuring eight inches across,—always remember to give a good drainage to the pots by placing over the hole plenty of potsherds. When they are in flower, give them moderate supplies of water. The flower stems should be tied up to sticks as they advance, to prevent their growing crooked. When they are in full flower, give attention to the fertilizing of the blossoms and saving of the seed, and afterwards cut away the decayed stems. Many of the herbaceous species will flower all summer if turned into the open border, for which purpose the poorer seedlings answer very well.

The shrubby species and varieties require a somewhat different soil from the herbaceous ones ; it may be mixed of equal parts well decomposed manure or leaf mould and loam, adding a small portion of sand. The herbaceous kinds are propagated by division of the root, and the shrubby ones by cuttings. Soon after the former have done flowering, separate the old roots, potting them into small pots and placing in a rather shady situation, as recommended for the seedlings. Cuttings of the shrubby ones may be put in at almost any season of the year, in a light soil composed of loam and leaf mould ; but the best time is just before, or soon after, they have done blooming ; the young plants will then get strong before winter, and will flower more vigorously the next season. Put ten or twelve cuttings in a pot and place it in a shady situation, where they will root in a fortnight or three weeks, and should then be potted off singly into small sized pots.

C. corymbosa and *péndula* are beautiful herbaceous species, and the hybrid varieties are all elegant ; *C. integrifolia*, *rugosa* and *arachnoida*, with the hybrid varieties, are splendid shrubby ones. The latter are scarcely more than biennial, and should be annually propagated from cuttings. We look forward with the expectation of soon seeing our collections enriched with many of this splendid tribe, and, at another time, we hope to add some further remarks.

ART. VI. *Notices of new and beautiful Plants figured in the London Floricultural and Botanical Magazines; with some Account of those which it would be desirable to introduce into our Gardens.*

Edwards's Botanical Register, or Ornamental Flower Garden and Shrubbery. Each number containing eight figures of Plants and Shrubs. In monthly numbers; 4s. colored, 3s. plain. Edited by John Lindley, Ph. D., F. R. S., L. S., and G. S., Professor of Botany in the University of London.

Curtis's Botanical Magazine, or Flower Garden Displayed, containing eight plates. In monthly numbers; 3s. 6d. colored, 3s. plain. Edited by William Jackson Hooker, L.L. D., F. R. A., and L. S., Regius Professor of Botany in the University of Glasgow.

Mr. David Don has lately been appointed Professor of Botany in the King's College, of London.

In our last, p. 175, we stated that the Hon. and Rev. W. Herbert was preparing for publication a revision of the order *Amaryllidaceæ*. We have learnt since, that it is to contain between thirty and forty copper-plate engravings, in which representations of upwards of eighty "new plants will be given;" and it is to contain "ample details." It is intended for the unlearned cultivator as well as for the scientific botanist. A treatise on hybrid vegetables is to be subjoined to it.—(*Gard. Mag.*)

The *Sertum Orchidium*, also noticed in our last, is to appear in twenty folio numbers, every two months, "each containing five plates, highly finished, from drawings made expressly for the purpose."

DICOTYLEDONOUS, POLYPETALOUS, PLANTS.

Cactaceæ.

CACTUS.

At Belmont Place, *C. Ackermánii* has been splendidly in flower the past month; a small plant had expanded at one time three of its gorgeous and brilliant blossoms. *C. Jenkensónii* shows fine buds, and will be in flower about the middle of this month. *Cereus speciosissimus* is in full flower in several collections.

Onagrææ.

ÆNOTHERA

humifusa Nuttall Æ. *concinna Don* Pencilled Evening Primrose. A pretty hardy annual; growing about six inches high; flowers pale rose-colored; appearing all summer; a native of Florida; propagated by seeds. Bot. Reg., 1829.

"A pretty, hardy annual," said to be a native of Chili. The seeds from which the plants were raised were received from the gardener of Mr. Lambert, who probably made some mistake, as it

appears to be the *Æ. humifusa* of *Nuttall*, who discovered it growing on the sea-coast in Florida. It is a small, low growing, spreading species, one plant covering about a foot of soil, with numerous pink flowers. If the plants are set in a shady situation, the flowers acquire a darker color. A desirable little plant for growing in pots in parlors, from which the sun is excluded by the situation of the house. In the text accompanying this plate, Dr. Lindley has some remarks upon the genus *Ænothëra*, which has lately been revised by "one Mr. Spach," a German botanist, resident at Paris. We agree entirely with the sentiments of Dr. Lindley upon this subject, and are so well convinced that they are the same views of all who have watched the course of modern botanists, that we have made the following extract, which should be attentively read:—

"A proneness to disturb existing nomenclature is very commonly alleged against modern botanists in a mass, and is looked upon by the public, who are much inconvenienced by it, as a besetting sin in modern natural history. That there is a good deal of prejudice, much misconception, and no small degree of ignorance in this popular outcry, I or any botanist could easily prove; for it is impossible that, in a science of observation, the ideas of any man should remain fixed and immovable, unless, indeed, in the case of those gentlemen whom science every now and then leaves so far behind her, that, in the end, they are well nigh lost sight of altogether. As new objects are discovered, the necessity of new systematic combinations becomes evident, and the ideas of botanists change accordingly, the visible result of which is occasional changes in nomenclature. Genera are thus materially affected from time to time, and new species, as they are discovered, render the creation of new genera necessary, into which some of the species of the old genera are very often transferred. But, on the other hand, it is most true, that there are too many botanical writers who, without due consideration, or a sufficient power of forming good general views, or from an incomplete and superficial acquaintance with their subject, are, like this Mr. Spach, in the habit of introducing innovations which science, indeed, repudiates, but which produce the greater public inconvenience, because it has usually happened that the writings of such persons are intended for popular purposes, and are directed to subjects of common occurrence. In the case I have now brought forward, the genus *Ænothëra*, one of the most natural and indivisible in the whole science, is cut up into twelve pieces, to which, what with synonyms and blunders, at least sixteen generic names belong, and the adoption of these renders necessary something more than one hundred new specific names, which, for one genus, is pretty well. Surely, I shall not be thought too harsh and severe, when I pronounce the writings in which such enormities are perpetrated, to be scientific nuisances."

Amongst all the absurdities which Dr. Lindley thinks Mr. Spach has committed, he states that there is one thing which is of some importance. This is, that "certain supposed *œnotheras* have the chalaza bordered by a fringed margin." This is obviously an additional organ and a special type of structure; it is the beginning of the feathery appendage of the seed of *Epilobium*, but is incapable of performing the office of buoying up the seed in the air so as to enable it to be dispersed from place to place. I find the structure to be as Mr. Spach states, and that the species collected by the character are *Æ. Romanzovii*, *purpurea*, and the like, which will not mix with the true evening primroses, and which have a peculiar habit. Among other things, their flowers have no tendency to become yellow. To these the name *Godetia* is applied. (*Bot. Reg.*, Feb.)

serotina Nuttall Late-flowering Evening Primrose. A hardy ornamental perennial; growing about two feet high; flowers yellow; appearing in October and November; a native of North America; propagated by seeds and probably division of the root. *Bot. Reg.*, 1840.

"Sent under the present name by Mr. Nuttall to the Liverpool Botanic Garden." It is not, however, mentioned in his *Genera of North American Plants*, nor by any other writer on the plants of this country. It is similar to *Æ. fruticosa*, differing principally in the habit of growth. The leaves are linear-lanceolate, stem tolerably erect, the flowers appearing in dense corymbs or heads. Cultivated easily, in dry soil, but grows best in a rather moist one, well drained. The period to which its flowering is protracted renders it an "acceptable species." (*Bot. Reg.*, March.)

Loasacæ.

BARTONIA Lindley (Named in compliment to the late Dr. B. S. Barton, of Philadelphia.)
aurea Lindley Golden-flowered Bartonia. A beautiful hardy annual; growing to the height of two or more feet; flowers brilliant yellow; appearing in July; a native of California; propagated by seeds, in rich soil. *Bot. Reg.*, 1831.

Among the many plants, figured in the numerous botanical and floricultural publications of the day, all of which are interesting to the botanical world, though not equally so to the florist or the amateur cultivator, this is one of great beauty. It cannot be expected that every new plant which is discovered will be equal or superior in splendor to any previously introduced. Some persons, however, open these periodical publications with the anticipation that they are to there behold brilliant and gorgeous paintings, of new plants, far exceeding in elegance those which already ornament our gardens. These expectations are too frequently disappointed when they see the pages occupied with humble or inconspicuous species; we have, indeed, sometimes been almost disposed to find fault ourselves; but when we reflect how many new plants are continually being discovered, it cannot be supposed that but a few will be of real ornament to our gardens. When such do occur, they are the more highly prized. With what feelings of delight have we beheld the *Coreopsis* (now *Calliopsis*), and *Centaurea*

(now *Plectocéphalus*) of Nuttall; the clarkias, eschscholtzias, and beautiful plants introduced by the lamented Douglas, from California. They repay for all the less showy, though not less interesting, species which have been figured for years. It is with the same feelings of gratification that we behold the figure of the brilliant species of the genus *Bartonia*, which is now lying before us, and which is, also, one of the latest and richest acquisitions by Mr. Douglas, from California. It is a half-hardy annual, and flowered, for the first time, in the London Horticultural Society's garden, in July last. We cannot better convey an idea of its magnificence than to quote the language of Dr. Lindley:—"It is only beneath the bright sunshine that its splendid flowers unfold; in the early morning the plant is a shabby bush, with pale greenish-gray branches and reedy leaves; but, as the sun exercises his influence, the petals gradually unfold, as if in acknowledgment of his power, till every branch is radiant with gold; and so metallic is the lustre of the inside of the petals, that one would really think they must be composed of something more enduring than the delicate and perishable tissue of a flower." The flowers are about the size of the *Eschscholtzia*, perhaps a little larger, but far more symmetrically formed, and are very numerous on the extremities of all the branches. Dr. Lindley thinks it a species which will be apt to degenerate, especially if it is neglected, or not sufficiently supplied with rich and moist soil, and he recommends that it should be placed in a sheltered situation, as the branches are very brittle, and liable to be broken by the wind; in a warm and sunny spot, or the flowers will not be brilliant, and a rich soil, as "she is a *gourmande* in her way, and, if starved, will not gain half her natural size;" moisture it must have, for "she is a thirsty sort of personage, and would prefer the banks of a rivulet to the side of a hill." We hope it will be speedily introduced. (*Bot. Reg.*, Feb.)

Myrtaceæ.

TRISTANIA *Smith*. (From the Greek word *three* and *to stand*; in allusion, as we presume [Dr. Lindley], to the ternate disposition of the flowers and their stalks; the three-forked inflorescence of this doubtless very distinct genus being strikingly different from all to which it is nearly allied in the parts of fructification.)

macrophylla *All. Cunningham MSS.* *Large-leaved Tristania*. A tree growing to the height of fifty or sixty feet; requiring the protection of the green-house; flowers white; appearing in August; a native of New Holland. (*Bot. Reg.*, 1839.)

The specimens from which the drawing was taken, were contributed by Richard Harrison, Esq., of Liverpool, where it flowered in August last. The species grows to a large tree in its native climate. The plant from which the drawing was taken, has, however, attained only the height of about four feet. It loses its exterior bark like the *Arbutus Andrachne*. The leaves are large and coriaceous; the flowers usually appear in threes, and are white, with numerous yellow anthers. Desirable for a large conservatory.

Dr. Lindley has communicated in the text, information of six

other species, which were discovered by Allan Cunningham, in New Holland. (*Bot. Reg.*, March.)

Aristolochiæceæ.

ARISTOLOCHIA.

A. trilobata is figured in *Paxton's Magazine of Botany*, for February. It is there stated to be a native of South America, where it grows in damp woods. In England it is a strong climber, "of no mean appearance, growing freely in sandy heath mould and loam." This is a genus of which very few species are yet to be found in our collections; we do not recollect of ever seeing but two, *A. siphon*, which is perfectly hardy, and *A. serpentaria*, the common snake root of the druggists. *A. siphon*, the singular flowers of which so much resemble the Dutchman's pipe, as to receive that name, is a desirable perennial, and should be in every complete collection. Many of the green-house species should also be introduced.

Rosæceæ.

KAGENECKIA (*M. de Kageneck*, Ambassador from the Emperor of Germany to the King of Spain.)

cratægifolia Lindley, *Synonyme*: *K. cratægoides* D. Don *Cratægus-leaved* Kageneckia.

A pretty evergreen half hardy shrub: growing four or five feet high; flowers white; appearing in June; a native of Chili; propagated by seeds and by layers. *Bot. Reg.*, 1836.

"A very pretty" shrub, which needs some protection in the climate of England, and would probably require a green-house in our climate. It is very similar to some of the *cratæguses*. The flowers appear in corymbs, six or eight in each, in the axils of the terminal branches. Figured from specimens which flowered in the London Horticultural Society's garden. (*Bot. Reg.*, Feb.)

Leguminæceæ.

KENNEDYA.

glabrata Lindley *Smooth-leaved* Kennedya. A pretty green-house climber; with scarlet blossoms; appearing in May; a native of New Holland; propagated by cuttings. *Bot. Reg.*, 1838.

Communicated from specimens which flowered in the collection of Mr. Knight, of the King's Road. The plant has slender wiry stems, broad ovate sharp-pointed stipules and smooth leaves, which are shining and almost destitute of hairiness; characters which "sufficiently mark the species." The flowers appear in clusters, from three to six in each, on axillary peduncles, and are of a very brilliant scarlet; a green spot, bordered with dark brown, at the face of the standard, gives additional effect to the color. (*Bot. Reg.*, March.)

A species called *K. splendens* is figured in *Paxton's Magazine of Botany*, for March. It is a splendid plant, and if a *Kennedya*, of which there is some doubt, is by far the most magnificent that has yet appeared. The specimen, from which the drawing was taken, was from the collection of the Messrs. Young, of Epsom, where the plant flowered in October last, for the first time in the country. Its native country is uncertain, but the Messrs. Young think they received it from Brazil, with some other plants. It is an evergreen

climber, with a smooth stem; leaves ternate, oblong lanceolate, smooth, and of a dull green color. The flowers, which are large, appear on axillary racemes, ten or twelve inches in length, in threes, and are of a gorgeous crimson. It is easily cultivated in a green-house, in loam, peat and sand. The Messrs. Young have a few plants for sale at the moderate price of *five guineas* each. It is not likely to become very common at present.

POINCIANA.

P. pulcherrima is figured in the last-mentioned work for February. It is a splendid ornament in stove collections, and although introduced to England in 1691, is still a scarce plant. We believe it is in some collections in this country, but the plants are small and have never flowered. It is a native of the West Indies, where it grows so plentifully as to be used for hedges, and has obtained the name of *flower-fence*. Plants or seed can be easily procured, and we hope to see it in every stove in the country.

Amarantaceæ.

CELOSIA (derived from *Kelos*, something burnt; the flowers looking as if scorched and dried up by exposure.)
coccinea Willd. Scarlet Coxcomb. A hardy annual; with scarlet flowers; appearing all summer; propagated by seeds. Bot. Reg., 1834.

“One of the many forms in which the coxcomb makes its appearance in Asia.” It differs from *C. cristata* chiefly in the “crowded pyramidal arrangement of the inflorescence, the narrower leaves and the short stamens;” is hardier than the latter species, so much so that it demands no other attention to bring it to perfection than is required by any other annual; and it “goes on enlarging its glowing crimson tassels, in the open border, till winter destroys it.” Drawn from specimens communicated by the Hon. W. F. Strangways, from his garden, in Dorsetshire, in October last. Very beautiful and worthy of introduction. (*Bot. Reg.*, Feb.)

DICOTYLEDONOUS, MONOPETALOUS, PLANTS.

Lobeliaceæ.

LOBELIA

decurrens Cav. Wing-stemmed Lobelia. A hardy perennial plant; growing about two feet high; flowers blue; appearing from June to August; a native of Chili; propagated by cuttings. Bot. Reg., 1842.

“Not unfrequently seen in collections.” Stem erect; leaves ovate-lanceolate; flowers light blue, axillary on dense terminal racemes. It grows vigorously during summer, in a moist partially shaded peat border, but is unable of bearing the winter without protection. Probably it requires the same culture as *L. syphilitica*. The plant has an exceedingly acrid, milky juice, rather dangerous to those who handle it incautiously, and which will prevent it from becoming common. (*Bot. Reg.*, March.)

Brunoniaceæ.

BRUNONIA Smith (In compliment to Robert Brown, Esq., D. C. L., &c. &c., one of the most learned and systematic botanists of this or any previous age).
australis R. Brown Southern Brunonia. A handsome perennial green-house plant; growing about a foot high; flowers light blue; introduced in 1834; propagated by division of the root. Bot. Reg., 1833.

"A most interesting new perennial," in appearance somewhat like the sweet scabious, but it is "delightfully fragrant." Leaves radical; the flowers appear on long slender scapes, and are of a handsome light blue color. Introduced by Mr. James Backhouse, in 1834, and figured from the collection of Mr. Lowe, of the Clapton Nursery. A very desirable plant. (*Bot. Reg.*, Feb.)

Scrophulariæcæ.

CALCEOLARIA.

C. corymbosa var. *Talisman*, is figured in *Paxton's Magazine of Botany* for February. The flowers appear in forked corymbs, and are of a deep blood-red color, with slight notches in the corolla. It is a very brilliant variety, and raised, if we recollect correctly, by the Messrs. Young, and once or twice imported into our collections, but died on the passage. Some remarks on this genus will be found in another page.

Solanæcæ.

SOLANUM.

In the same work, above named, a species is figured as *S. crispum*. The flowers are of a rich purple-blue, and are produced in large corymbs; it is stated that, if "trained against a wall, it makes as fine a show as the *Glycine sinensis*, [*Wistaria Consequana*], and continues in bloom a long time." A native of Chili; introduced in 1824. Grows freely in any common garden soil, nearly hardy, and increased easily by cuttings. Drawn from the nursery of Mr. Lowe, of Clapton.

Acanthæcæ.

THUNBERGIA.

In our last, p. 191, we stated that a white variety of *T. alata* had been produced. In the work just noticed, is a drawing of the same, from specimens communicated by Mrs. Lawrence, of Ealing, in whose collection it flowered last summer. The flowers are larger than the *T. alata*, and are of a very pure white, with a conspicuous dark spot in the centre. A fine acquisition, which will contrast elegantly with the pale buff color of its parent.

MONOCTYLEDONOUS PLANTS.

Amaryllæcæ.

ALSTROEMERIA

aurantiaca Don *A. aurea* Graham, in Jamieson's Journal. A green-house perennial plant; growing three feet high; flowers orange yellow; appearing in June; propagated by division of the tubers. Bot. Reg., 1843.

"Flower stem erect, with smooth leaves, persistent and green for months after the seed is ripe." The blossoms appear in large

clusters on long peduncles. "A very handsome species," easily cultivated in the green-house. (*Bot. Reg.*, March.)

COOPERIA W. Herbert, MSS. (In compliment to Mr. Cooper, gardener to Earl Fitzwilliam, at Wentworth House, one of the most successful cultivators of rare plants).

Drummondii W. Herbert, MSS. *Drummond's Cooperia*. A green-house bulb; growing about a foot high; flowers white; a native of the Texas. *Bot. Reg.*, 1835.

Bulb ovate; scape one flowered; leaves narrow flaccid and red at the base. "Nearly allied to *Zyphryanthès*." It was discovered in Texas by the lamented Drummond, and sent by him to Scotland, where it flowered in several gardens, in 1835, at nearly the same time. It is at present considered as a green-house plant. (*Bot. Reg.*, Feb.)

chlorosolen Herbert, MSS. A green-house bulb; growing a foot or more in height; flowers white. A native of Texas. Text. in *Bot. Reg.*

"Nearly akin to *C. Drummondii*," and has flowered in the collection of Mr. Herbert, at Spofforth. (*Bot. Reg.*, Feb.)

Orchidaceæ.

ONCIDIUM

Russellianum Lindley. The Duke of Bedford's *Oncidium*. A stove epiphyte; with violet purple flowers; a native of Rio Janeiro; introduced in 1832.

Different from the general form of the genus *Oncidium*, to which, Dr. Lindley states, he is not sure that it belongs; but not possessing sufficient information in regard to the plant, he does not feel justified in creating a new one. Pseudo-bulbs, ovate; leaves ligulate-lanceolate; raceme about four-flowered. Flowers lilac and brown purple. The species is named in compliment to his grace the Duke of Bedford, in whose collection at Woburn, it first flowered in Europe. (*Bot. Reg.*, Feb.)

Liliaceæ.

YUCCA.

Y. aloifolia is figured in *Paxton's Magazine of Botany*, for March. It is a handsome species, which, with *gloriosa* and *filamentosa*, should be in every good green-house collection of plants. They are valuable for setting out on lawns in the summer season, where their singular foliage has a very ornamental appearance. Specimens of this species, from which the drawing was taken, were sent from the Manchester Botanic Garden. The plant in bloom stood nine or ten feet high; the spike of flowers measuring four feet, forming a "pyramid of beauty and attractiveness." Cultivated easily in rich loam with a small proportion of pulverized peat. Increased by suckers.

Y. filamentosa, in the collection of Mr. Mason, of Charlestown, is now throwing up a fine spike of flower buds, and will soon be splendidly in bloom.

REVIEWS.

ART. I. *The Gardener's Magazine and Register of Rural and Domestic Improvement.* Conducted by J. C. Loudon, F.L.S., H. S., &c. In Monthly Numbers, 8vo., 1s. 6d. each. No. LXXII, for March.

THE first article is a "Descriptive notice of Castle Coole, in the County of Fermanagh, Ireland," which relates chiefly to large specimens of trees on the plantation.

Art. 2 contains "Extracts from the letters of an English traveller" in Sydney, enumerating some of the trees and shrubs in flower there in May and June, the winter months in New South Wales. Some of the plants mentioned are *Acácia sauvœolens* and other species, *E'pocris grandiflora*, *pulehella*, *myerophylla*, and *heteronema*; several *Banksias*, *Styphelia tubiflora*, *Lambertia formosa*, *Lobelia gracilis*, *Corræa speciosa*, *Pimelæa linifolia*, *Hibbertia*, &c. The thermometer on June 15th, stood at 60° in the shade at noon, and at 45° in the evening, when the cold is sensibly felt, and fires are very comfortable.

Art. 3, relating to the plantations of the celebrated Jacob Tonson, in 1827, contains little that is interesting to our readers. An old mulberry tree, in one corner of the vineyard, was blown down some years since; its larger boughs stuck in the ground, and, having taken root there, they now support the trunk, though all traces of the original roots are gone. The tree produces a regular crop of fruit every year.

The fourth article is "A Plan for the exhibition of a natural arrangement of Plants," drawn up for the Glasnevin Botanic Garden. It is accompanied with a plate, which occupies two pages. The ground is laid out with a serpentine walk. On the right of this walk, all the exotic genera are planted; and, on the left, all those indigenous to Great Britain; the plants of the three countries are to be identified by "distinctive labels of metal, impressed with the rose, shamrock, or thistle"—a valuable article when the planting of *Arboretums* shall be commenced in our country.

Art. 5, "Design 7," for laying out the frontages of houses, with plates.

The sixth article contains "Remarks on the ringing of fruit trees," translated from an article on the subject published in Belgium. We consider this a very useful paper, and extract it entire, for the benefit of our readers:—

"Ringing a tree cuts off the part operated upon from the circulation of the sap, and necessitates it to subsist principally on the nourishment

which the leaves derive from the air. We will not say in what respects this nourishment differs from that which the tree derives from its roots; but we will remark that nature provides abundance of leaves for those buds which she intends to produce flowers.

"Peach and apricot trees will not bear ringing, because they always produce their fruit on the young wood; and the vine still less, because it bears on the growing shoot. Ringing does not advance the fructification of either plum trees or young cherry trees; and it is apt to produce the gum in old trees of the latter species, as the wound is a long time before it heals. Apple trees shrivel above the ring; and, if they live, they do not soon bear any fruit. The pear tree thus remains the only species of fruit tree on which the operation of ringing can be practised with advantage.

"Ringing may be performed at any season, but it only produces its full effect when undertaken in the spring, at the first appearance of the movement of the sap, and as soon as the bark begins to crack. The wound ought not to be wider than the thickness of the blade of a knife, if it is desired that it should heal before the end of the season. The operation ought to be performed on a side branch which is rather stronger and more elevated than its neighbors; or one which is badly placed, and which, in the end, may be removed without disfiguring the tree. A tree will not bear ringing either round the trunk or round the leading shoot, unless there should by chance be a second leader, and one may be removed without injury.

"The tree which has had its trunk operated upon is in danger of either perishing, or remaining a long time in a sickly state; and, after it has recovered its health, its sterility will be more durable than if it had never undergone the operation.

"If a branch is ringed too close to its base, or the point where it is inserted into the trunk, it will be in danger of being beaten down by the wind, or broken by the weight of fruit. A good place is at a quarter of the length of the bough, and beyond other side shoots, the eyes of which will also generally produce fruit.

"The upper lip of the wound swells considerably, and the more so according as the ring has been broad, or the season far advanced. This tumefaction of the bark is partaken of by the wood; and the formation of this tumor proves that it is principally by the descent of the sap, which has been elaborated in the leaves, that the tree increases in girth. It rarely happens that a pear tree, operated upon when it has attained the age for bearing, does not go into flower the same year that the operation is performed. There are, however, cases in which the repugnance of a tree to flower resists the efficacy of this method; these occur with all drooping trees, and whenever the wood is hard and rough; and, when at last trees of this description do show flowers, it is upon another branch rather than on that which has been operated upon.

"The eye which is constrained by ringing to form its flowers prematurely, is of the same description as a similar eye springing from the young wood: the flowers, in both cases, are very liable to drop off; and the fruit, when it becomes ripe, is deficient in color.

"The fruit of a branch operated upon, if it comes to any thing, owes its strength to the state of suffering of the bough which bore it; it is unequal in bulk, very often small, worm-eaten, dry, cracked, gritty, and of an excessive sweetness, which it obtains at the expense of its juice. The fruit should be reduced, by thinning, to a very small number, if it is wished that they should attain perfection.

"The new property which I have discovered to belong to ringing is that it causes the eyes of branches which have not undergone the oper-

ation, to flower also; and that these are almost always immediately opposite to the branches which have been operated upon, or a little above those branches. There is not a single case known where this effect has not been produced, though till now no one has remarked this excellent property, which is itself sufficient to prove the advantage, and perpetuate the practice, of ringing; because it not only makes the wounded branches produce fruit, but, by throwing those branches into bearing that are not mutilated, it insures a fertility to the tree which is not likely to be soon interrupted.

"Another mode of bringing fruit trees into bearing is, to take a ring of bark from some of the principal roots, at a little distance from the trunk. The ring ought to be more or less broad, according to the thickness of the root. The operation may be performed at any season, in April or May, as well as in August or September, without there being any reason to fear the extravasation of the sap, which is so prejudicial to the tree when the roots are pruned in the spring. A year, however, is gained when the operation is performed early in the season. There is no occasion to apply any dressing or covering to the wound: in fact, there is no occasion to do any thing more than to draw the earth round the tree, and to tread it down firmly with the feet. If the roots are not ringed all round the tree, the opposite side to that on which the incision has been made will bear fruit; which coincides with the effect produced by ringing on the branches, and denotes a physiological fact which has not been hitherto noticed. The wound heals so rapidly, that in about a year no traces of it can be discovered, except a few wrinkles in the bark. No excrescence is formed, and no other roots are sent out, either from the lips of the wound, or above or below it; at least, none that can be supposed to have been occasioned by the incision. The root operated upon appears, indeed, less likely to send out suckers than any of its neighbors. The fruit does not, in the slightest degree, participate in the state of disease or suffering in the tree, which has thrown it into bearing.

"The wood of the shoot below the incision bursts almost always from the bark, or the lips of the wound: this wood is of the kind called false; and the buds of it ought to be rubbed off as soon as they appear; as preserving this wood can only injure the bark, and retard the healing of the wound.

"The principal object of ringing ought to be, not to throw known varieties prematurely into fruit, or to make trees bear on which other resources may be resorted to in order to produce the same effect (such as shortening the largest roots, pruning the tree after the sap has risen, &c.); but to force young seedling plants to show early the bad or good quality of their fruit. It must, however, be used cautiously, as it sometimes does injury instead of good, and when applied to the side branch of an espalier, it produced no other effect than that of rendering wood sterile which was before only backward in bearing.

"Ringing never produces a marked effect on the fertility of a branch more than once; if repeated the following year, it more frequently produces sterility, than a continuation of bearing.

"The mode in which ringing affects a tree is precisely similar to the effect produced by many other modes of suffering which are employed to throw trees into bearing: such as bending the tree, breaking or twisting the branches, transplanting, &c., and it should only be employed with one branch at a time; it cannot be applied to several branches at once, without disfiguring, and probably ruining, the tree."

Art. 7, "On the arrangement of fruit trees in kitchen gardens," is an excellent paper, extending to seven or eight pages. We should be glad to make large extracts from it if our limits would

permit ; as it is, we can only select a few of the more useful paragraphs. In relation to the cropping of fruit borders with culinary vegetables, the writer remarks :

"It seems to be generally admitted, both by writers on horticulture and by good practitioners, that, when the fruit department must be blended with the culinary one, it is by far the best arrangement to place the fruit trees round the margins of the quarters, and to leave the interior completely at the service of vegetables, as well for the sake of economy as of effect. These borders are generally formed from four feet to six feet in width, and are, for the most part, cropped with some kind of vegetable that requires digging. It seems surprising that a border of this width should be deemed too much for a row of trees of this description ; but it appears that such is the case ; and, through the practice just alluded to, the upper and most valuable roots of the fruit trees are continually cut away, and the trees driven to seek their food in a subsoil of the most ungenial character. Whether trees of this class possess the power of selection in regard to their food, I am not physiologist enough to know ; but, if they do possess it, it would be of little avail when they were situated in a barren sand, clay, or gravel ; besides the great difference in the average temperature of the soil, which temperature does, of course, decline progressively downwards to a certain depth. Now, what is the consequence to trees thus situated ? They are rendered doubly liable to the blight produced by various kinds of insects : as, for instance, the aphides, the scaly insect, the red spider, &c. ; all of which, it is well known, will make way much more rapidly on a diseased subject than on a healthy one ; and, very frequently, by these means all the early-made wood is either crippled or destroyed, and a later crop of watery wood is produced at or after midsummer ; which, I hardly need say, is quite immature. In trees thus situated, the sap in the shoots is put in motion a long time before that in the roots ; and the consequence is, that leaves are produced chiefly from the fund of sap of the former year deposited in the branches, and which, being of a sweeter character, if I may use the expression, than the ascending sap, is the very food for the above-named insects, as we find by experience ; and the wood that is produced later is overtaken by the chills of autumn, before the leaves have performed half their functions. These observations apply most especially to apples ; but they will apply, in some degree, to almost every other kind of fruit tree, if treated in the way here described."

The following, in relation to pear trees on walls, though not wholly applicable here, where we have but few trees in such situations, may, nevertheless, be read with interest :—

"As to pears on walls, although they bear chiefly on spurs from the old wood, after the manner of apricots, &c., yet there is dissimilarity enough to require a somewhat different treatment. In the first place, they cannot endure what I must call a capricious soil ; I mean one that works by fits and starts ; such are all light sandy soils, which derive all, or most of, their virtues from manures. Such soils, in June and July, with showery weather, will make pear trees grow more like willow bushes than fruit trees ; whereas in dry hot summers the very extreme effects are, of course, produced ; and, although such trees may have a good crop of fruit on, little of it will come to proper perfection, in either size or flavor, or both will be lamentably deficient. But in a strong loamy soil their growth is steady and uniform, in spite of seasons, and can be depended on ; the sap, also, is more easily controlled, or directed, in trees on such soils. It is of the utmost importance, of course, in all modes of training whatever, to get as perfect a command over the ascending sap as possi-

ble, through the mismanagement of which most of the barrenness so much complained of in pear trees, in my humble opinion, arises. It needs not any pains on my part, I presume, to prove that the free admission of light to all parts of a trained tree is the cause of more pruning and stopping of shoots than is at all times wholesome to the constitution of the tree. The question here assumes a physiological character; and, although "fools rush in where angels fear to tread," yet, having got my foot fairly in, I feel I must proceed in spite of angry critics. As to the effects of shade on the buds of fruit trees, I am quite aware that it tends to barrenness, as being adverse to the elaboration of the sap, or true blood, of the plant. Let its evils, however, be as great as they may, I am satisfied that they are not greater than injudicious disbudding. As, however, it will happen, through most seasons, especially moist ones, that they will make more breast wood than is compatible with the due admission of light, what must be done? If it be pruned away, or disbudded nearly as fast as it is made, the embryo flower buds will be forced from their snug retreat into wood. If it be left on the tree all the summer, from the almost total exclusion of light, the buds will be meagre and imperfectly ripened, and a bad development in the ensuing spring, and a shy setting will be the consequences. How, then, are these evils to be avoided? Simply by laying in the leading branches at greater distances than they are commonly done (I should say a foot apart); and then we shall be enabled to procure a moderate crop of foreright shoots, without excluding the light. My maxim is this as to disbudding, as it is termed. Having abundance of free-growing wood in the centre of the tree, and this all nailed as nearly perpendicular as possible, I proceed (I speak now of pear trees), in the early part of July, or, at the earliest, the end of June, to crop with a knife some of the foreright shoots back to four or five joints, commencing at the bottom of the tree, and doing a few tiers of branches at a time; in the course of another week, I go over them again, and crop another tier or two, and so on, advancing from the bottom of the wall towards the luxuriant centre of the tree; and always, if possible, taking advantage of a dry time for the purpose, or when, in fact, there is the least excitement to wood. Some few shoots here and there I entirely disbud; for instance, where there are several situated close together, making the tree dark in that part; and those I leave are pruned to within about four or five leaves. As for neatness of appearance, I esteem it as highly as any one; but when, in kitchen-gardening, neatness is found in opposition to utility, the former, of course, must give way: however, a clever hand at fruit trees will render the two sufficiently compatible for all purposes. It is a fact, and known well to most practical gardeners, that those embryo buds of pear trees which are to produce blossoms the next spring must develop a good tuft of large and healthy leaves early the spring preceding; for, if they do so, and do not push into wood, they are sure to be blossoms the ensuing spring. How frequently we see pear and other trees against walls, in which the upper branches cannot bear through luxuriance, and the under ones through weakness; and this in the selfsame tree! Now, this is very commonly the case on the capricious light soils above alluded to, and it requires no small skill and attention, on such soils, to divert the ascending sap into the lower branches; and, unless diverted into these inferior parts of the tree, to the production of young wood, ay, and breast wood too, from where is the true sap conducive to fructification to be secreted? Let any one, for instance, select an apple or pear tree, growing in his garden, as a rough espalier or standard, with a succession of side shoots from the lower part of the bole upwards; in fact, as nearly resembling a wall tree as possible. Let him, then, I say, continually divest one portion of the tree of all its foreright shoots, as fast as they are produced, and leave the other with

all its breast wood on, and observe the difference. He will soon find that the stripped part will almost cease to thicken, and, in a short time, will not possess power sufficient to form a good tuft of leaves on the embryo buds, as noticed in the early part of this paper; and will eventually become what practical men term "hide bound." The only way to decoy the ascending sap into the inferior branches, in the growing season, is by stopping the superior ones at a certain period of their growth, and leaving the inferior ones with all their breast wood growing. In the rest season, another way of effecting this is, by close pruning and shortening all the heart of the tree, which, by my mode of management, is always full of young luxuriant wood, and which I denominate "waste pipes." These waste pipes I not only encourage, but I stimulate the tree to make them by pruning. The purpose to which I hold these shoots subservient is, by their strong action, to cause the roots to make plenty of new fibres every year (the action of the root and top being well known to be reciprocal); which fibres, when in motion, are made, in the ensuing spring, to serve the purpose of the inferior branches. I speak now of such trees as I alluded to above. By pruning these "waste pipes" tolerably close (as to the degree of which, nothing but an intimate knowledge of the habits of the tree, and the effect desired, can guide us), the new root, now beginning to work, and which would have filled those shoots removed with the ascending sap, is made, instead, to fill all the inferior branches of the tree first; and, by the time that the trees have developed a good strong tuft of healthy leaves on the embryo buds, the waste pipes in the centre of the tree are getting to work, and decoy that heavy fund of sap away, which, had it not vent in this way, would have driven most of these buds into wood. Another point of much importance is, carefully, and at all times, to preserve a leading shoot at the extremities of all the branches."

The eighth article is upon the culture of the potato, containing the results of experiments made last season, which tend to show that whole potatoes are more profitable to plant than sets. The following is the result of one experiment:—

"One row was planted with eight whole potatoes (of the agricultural kidney), each containing eight eyes, sixty-four in the whole. Produce, thirty-three potatoes; weight, twelve pounds.

"Two rows of the same size were planted with eight sets each, each set containing four eyes, sixty-four in the whole. Produce, fifty-two potatoes; weight, eighteen pounds.

"The result was, that twice the quantity of land produced only an excess of one third in weight; but, if two rows had been planted with whole potatoes, the produce would have been twenty-four pounds. I have repeatedly tried the experiment, with nearly the same result; and, therefore, I come to the conclusion, that it is more advantageous to plant whole (kidney) potatoes than sets. The rent, the taxes, the ploughing, and the dung must be the same in both cases. I calculate that my Yorkshire friend loses £7 an acre, or 1000 guineas a season, by the use of sets.

"I have not tried the experiment with the round potato, which, generally, is so full of eyes, that it must be cut. But the pigs ask no questions: I speak only of potatoes fit to be eaten by man."

ART. II. *Boston Journal of Natural History, containing Papers and Communications read to the Boston Society of Natural History, and published by their direction.* Part I.—No. III. 150 pp. Hilliard, Gray & Co. Boston. 1836.

ANOTHER series of papers on the inexhaustible treasures of nature, read before the Society of Natural History in this city, lies before us. A very long communication on the new species of Hymenoptera, and observations on already described species, from the pen of that enterprising naturalist, Mr. Thomas Say, serves to enrich its pages and add to our knowledge of our native insect tribes. Most of the specimens we observed, are described as inhabiting Indiana, in which State, it is well known, this distinguished individual resided in the latter period of his life. An order of insects so extensive as the Hymenoptera compose, cannot be confined, in their locality, exclusively to the Western States, though only occurring in that locality, under the observation of the author of the essay. With the true spirit of minute and critical investigation, nothing seems to escape his penetrating and acute observation. From the very nails and tarsi of other species, he draws forth the devoted prey, and reduces it to order among the rest of his specimens. (*Vide p. 294.*) We cannot too much admire that spirit of microscopic research, which can derive satisfaction and improvement and confer benefit on others, from the minutest as the noblest work of Creative Power. We trust that whatever papers may be in the possession of the members of this society, which formerly belonged to Mr. Say, will appear in the future pages of their valuable Journal.

In the second article of the present number, we travel with the state geologist of Massachusetts on an interesting geological tour in the vicinity of Portland, Me. Several singular phenomena are presented to us, and some ingenious and plausible theories. In the clay, which he calls the "*nearest tertiary*" formation, he finds several interesting species of fossil shells; of *Nucula*, *Mya*, *Sanicara*, *Bulla*. We know not how long fossils have been known to exist on our eastern Atlantic coast, even several miles from the sea, but have in our possession several interesting species both from Maine and our own State, discovered, as we presume, in a similar situation, not only identical with native, but even with foreign co-species.

In arranging the Cabinet of Ichthyology, its curator was led to examine the catalogue of the fishes of Massachusetts appended to Prof. Hitchcock's "*Geology*," etc., of the State. We were glad to see this paper, as we long suspected an incorrect list, and even an imperfect one, was affixed to the above work. Twelve individual species of various genera have been mentioned, omitted in

the catalogue. We would suggest whether several more may not still be appended to the list. In the mouths of small fresh streams, where they enter into the sea, may be found an elegant little fish, which we have reason to suppose, without any other means of ascertaining than we possess, a beautiful species of *Gastrosteus*, (stickle back,) and it is not unlikely that this is not the only species. Do the mud fishes of Le Lueur, which he separated from the Cyprinidæ, comprise the *minnows* of marine or fresh waters? We could wish to see a work of a *purely scientific* character, with plain and correct figures of each genus, on our native fishes, and trust that the further researches of Dr. Storer will lead to some such result.

An analysis of several coals, by Dr. Jackson, closes the present number. The newly discovered Mansfield anthracite was also subjected to his investigation. It resembles, in combustion, the Peach Mountain, of Pennsylvania. Time and labor will only decide whether its discovery will be of any real importance, or its existence and presence be of any considerable extent. . R.

MISCELLANEOUS INTELLIGENCE.

ART. I. *General Notices.*

Irregular Metamorphoses of Plants.—In flowers, irregular metamorphoses are extremely common: they consist of a multiplicity of the petals, of a transformation of the petals into stamens, and a change in color or in scent. In roses the multiplication of petals is the nearly universal cause of the double state of these flowers; in the rose œillet and many anemones, impletion depends upon the conversion of petals into stamens.

With regard to color, its infinite changes and metamorphoses in almost every cultivated flower can be compared to nothing but the alterations caused in the plumage of birds or the hair of animals by domestication. No cause has ever been assigned for these phenomena, neither has any attempt been made to determine the cause in plants.

We are, however, in possession of the knowledge of some of the laws under which change of color is effected. A blue flower will change to white or red, but not to bright yellow; a bright yellow flower will become white or red, but never blue. Thus the hyacinth, of which the primitive color is blue, produces abundance of white and red varieties, but nothing that can be compared to bright yellow; the yellow hyacinths, so called, being a sort of pale yellow ochre color, verging to green. Again, the *ranunculus*, which is originally of an intense yellow, sports into

scarlet, red, purple, and almost any color but blue. White flowers which have a tendency to produce red will never sport to blue, although they will to yellow; the rose, for example, and *chrysanthemums*. It is also probable that white flowers with a tendency to produce blue, will not vary to yellow.

Scent varies in degree rather than in nature; some plants which are but slightly perfumed, as the common China rose, acquire a powerful fragrance when converted to the variety called the sweet-scented; but there is no decided difference of scent among varieties of the same species.

Metamorphoses of fruit are very common, and administer largely to the wants of mankind. They consist of alteration in color, size, flavor, scent, and structure. The wild blue sloe of our hedges has, in the course of ages, by successive domestication, been converted into the purple, white, and yellow plums of our desserts. The wild crab is the original from which have sprung the many colored and excellent varieties of apple; some of which are scentless, others scented like the pine-apple and rose. In peas the parchment-like lining of the pod occasionally disappears, and the whole substance of the seed-vessel consists of lax succulent membrane.

Having thus passed in review the irregular metamorphoses of plants through all the different parts, there still remains a subject on which it is requisite to say a few words. This is the permanency of such metamorphoses, or their capability of being perpetuated by seeds. It is a general law of nature, that seeds will perpetuate a species, but not a variety; and this is no doubt true, if rightly considered; and yet it may be urged, if this be so, how have the varieties, well known to gardeners and agriculturists, for many years been unceasingly carried on from generation to generation without change? The long red, and round white radishes of the markets, for instance, have been known, from time immemorial, in the same state in which they now exist. The answer is this: a species will perpetuate itself from seed for ever, under any circumstances, and left to the simple aid of nature; but accidental varieties cannot be so perpetuated: if suffered to become wild, they very soon revert to the form from which they originally sprung. It is necessary that they be cultivated with the utmost care; that seed should be saved from those individuals only in which the marks of the variety are most distinctly conspicuous; and all plants that indicate any tendency to throw off their peculiar characteristics should be rejected. If this be carefully done, the existence of any variety of annual or perennial plant may undoubtedly be prolonged through many generations; but in woody plants this scarcely happens, it being a rare occurrence to find any variety of tree or shrub producing its like when increased by seed.—(*Lindley's Introd. to Botany.*)

ART. II. Foreign Notices.

ENGLAND.

New Species of the Dahlia.—Mr. Lambert exhibited before the Linnæan Society on November 3d, last, a branch and leaves of an arborescent spe-

cies of dahlia, from Oaxaca, Mexico, which is said to grow to the height of fifty feet. There are living plants of it in the Liverpool Botanic Garden.—(*Gard. Mag.*)

Ribes glutinosum.—Dried specimens of a species, with several others, under this name, were sent to the London Horticultural Society, by Mr. Douglas, during the years 1831, 1832, and 1833. The plants have not yet flowered (1835). It is nearly allied to *sanguineum*, but promises to exceed the latter in beauty; the bunches of flowers are twice the length of the bunches of *sanguineum*, and contain, at least, from thirty to forty flowers, which are borne on long slender pedicels; the color of the flowers is red. It is perfectly hardy, and grows in common garden soil.—(*Hort. Trans.*)

CHINA.

Chinese Style of Gardening.—The style of Chinese gardening, like all their other arts, is peculiar; they have no idea of spacious landscape; there is a littleness in all their designs; they have no desire for a small part of even the grandest features of nature: lakes, where a mackerel would be puzzled to turn; rocks which a man may carry away under his arm; aged trees fifteen inches high; and thick forests of pines composed of *equisetum*. Of whatever extent the ground may be, it is all divided into little squares, parallelograms, or irregular areas of a few square yards or perches. These compartments are surrounded by low brick walls, having a flat coping, on which are placed flowering plants, in fine glazed porcelain pots. The paths are often composed of flat stones, not two of which are on the same level, if near together. A great deal of trellis-work are in the gardens, either appearing like the remains of former fences, or as coverings of naked walls. If a ditch or artificial hollow be in the garden, it must be crossed by a semi-circular arch of four or five feet span. Their little tanks of water are not considered beautiful until they are completely covered with ducks'-meat (*Lémna*); in short, there are so many childish freaks which constitute the beauty of a Chinese garden, that it is astonishing so clever and civilized a people can be gratified with such puerile efforts of unnatural taste. As far, however, as their collections of flowering plants decorate a garden, the assemblage is enchanting. Their magnolias, bombaces, azaleas, camellias, ixoras, pæonias, &c., not to mention the great variety of herbaceous and aquatic plants natural to the country, are indeed magnificent; indeed one of the finest traits of the Chinese character is their fondness for flowers.—(*J. Main, in Hort. Reg.*)

ART. III. Domestic Notices.

Stray Leaf from Nature's Calendar, for May 18th.—Crimson, and green, and pure white! and what shades of verdant hue! With what magic power the woods have put on the cheerful livery of joyous and welcome spring. We might fancy that each shrub and tree was vying with its next neighbor in displaying its natural elegance, beauty, or loveliness.

Do you see that shining and deep green sempervirent holly ; unchanged and almost unchangeable it still remains as when its full developed foliage clothed its stout branches last summer. It has already lent its aid to enliven, by contrast, the barren majesty of winter, and still shines conspicuous in its unfaded glory. Next that group of white stemmed, graceful birches, now tremulous to every breath of genial spring in their lighter green and delicate foliage, and long pendent aments. The hardy and slow growing oaks are unfolding their tender leaves, green, crimson, yellow, and displaying their modest flowers, the future embryo acorn, for a future growth. The firm, rigid and silky envelops of the walnuts, in their numerous species, are expanded, and silently dropping from the bases of yet unfolded leaflets, no longer needed as guardians from injury and cold. The native prototypes of our delicious garden plums and apricots and pears, are lending their snow petals to fill up the picture, and, as you approach the meadow or the tangled thicket of the adjoining swamp, there meets your eye the bell-formed and nectared cups of the *Vaccinia*, or the lovely pearl necklaced corols of the early *Andromeda*, before which the *Eriçacææ* of more torrid regions fade in relative beauty. A few days has effected this mighty change,

“Shade unperceived still softening into shade ;”

so that even the most ardent admirer of autumn's varied and fading liveliness could now find each combination of coloring more delicately formed and exquisitely blended, than the silent precursor of icy winter can display. This is life, vital energy, the vigor of vegetable economy,—and that, the consummation and decay of perfected organization. Nor is the latter unpleasing, nor conveys it ideas of sadness and gloom. Nature is ever joyous and exhilarating. We want but the disposition to regard her operation as all beautiful in their time, to render her influence over our constant happiness effectual.—*Yours, R.*

Fine Varieties of the Dahlia.—This plant is now so well known and so universally admired that it is hardly necessary to say any thing upon its cultivation. In making a selection out of the great number of varieties now offered for sale, I send you a list of twelve for the beginner, viz. :—

Agrippina, mottled white.
Countess of Liverpool, superb scarlet.
Dennisii, fine ruby.
Douglas's Augusta, shaded purple.
King of the Whites, delicate paper white.
Lord Liverpool, fine dark puce.
Richardson's Alicia, white spotted.
Springfield Rival, dark rosy crimson.
Duchess of Bedford, brilliant scarlet.
Jason, bright gold color.
Perfection, superb rosy crimson.
Queen of Dahlias, white, with rosy lilac edge.

Yours, S. Walker, Roxbury, April, 1836.

Perspiration of Plants.—A beautiful instance of the very sensible perspiration of those plants, the venation of whose leaves are straight, (endogenæ), occurred to my observation this morning, on the young leaves of “*Tigridia*, *pavonia* and *T. conchiflora*.” A similar exudation of superfluous sap takes place in the *Gramineæ*, which, unless noticed before sunrise, escapes detection, as it rapidly passes off by the increased heat of the atmosphere. A large crystal drop of inodorous and tasteless liquid flowed from the summit of each leaf, and when removed, was replaced by another. The atmosphere of the room was a little drier than that without, and so cool as to render the exudation perceptible for several hours.—(*Com. by J. L. R., May 25.*)

New seedling Pansies.—Mr. Walker, of Roxbury, has just shown us some new and most beautiful varieties of pansies, which have come into flower this season. Two among the number, we thought remarkably fine. These have been named, and probably, as soon as increased, will be ready for sale. We are glad to see amateurs giving more attention to this interesting flower.—*Conds.*

English Hawthorn (Crataegus Oxyacantha).—A fine specimen of this charming tree is now in full bloom, in the garden of J. W. Boot, Esq., of this city. Few trees or shrubs exceed this in beauty, and we wish that it was more generally planted than it is at present. Its blossoms are extremely fragrant, perfuming the air to a considerable distance. Planted singly on lawns or groups, with other trees, it is one of the prettiest ornaments of landscape.—*Id.*

Nymphaea carulea.—This splendid species, of the water-lily tribe, is now in bloom at Belmont Place. One or two plants, in the stove, have thrown up two strong flowers, which are superbly beautiful in the morning. We believe this is the first time it has ever flowered in this country. *N. pigmea*, a small white species, is also throwing up flower-buds.—*Conds.*

Wistaria Consequana hardy.—A small plant of this splendid climber, we set out in the open border, against a south wall, last season, late in July. It made but a small growth, owing to the weakness of the plant, which was imported the same season. No protection was given to it during winter; and at all times, excepting when the ground was covered with snow, it was wholly exposed to the cold. It has, however, this spring, started in one or two places, six or eight inches above the soil, and will probably make vigorous shoots during the summer. We shall leave the same plant out another winter, to fully test the experiment. If it is hardy in our climate, it will be one of the richest acquisitions, that has been made to our garden for some time.—*Conds.*

Phytolacca decandra.—In *Loudon's Magazine*, (Vol. IX, p. 255,) among the articles copied from the provincial papers, is one stating that this plant is used "in America, like asparagus and spinach." The plant is well known as growing by the road sides, in many parts of the New England States, called generally *poke*, and Dr. Bigelow, in his *Medical Botany*, (Plate 3d), states that the root is a violent emetic. Has any of our readers ever known of its having been used as a substitute for asparagus or spinach?—*Conds.*

Microscopic Beauty of some of the Gramineæ and Juncæ.—No truer assertion than of Holy Writ, that the splendor and magnificence of human art and industry, cannot equal the exquisite beauty of the grass of the field. No ostrich feather can compare in elegant lightness and elasticity with the plumose anthers of these humble but useful plants, nor the rich produce of the silk-loom vie with the scarious membranes of their floral envelops. How securely, though almost invisibly attenuated the support of the filament, does the heavy laden anther, seemingly float on the air, from the spikelet, while below, secure in its husky envelop, lies the curious fabricated and all important germ.

The perianth of *Luzula campestris* (now in flower on every sandy plain), forms no unapt resemblance, from beauty and manner of coloring, to the more specious and splendid *Anaryllis vittata*, which, instead of a few flowers, we here have a considerable panicle. Had we the eyes of the insect tribe, if they are as microscopic in effect as in appearance, these minuter beauties of Creative Power would perhaps raise our admiration as much towards the "noisome weed," as the protected and favored tenant of the garden.—*R. L. J.*

Seedling Hibiscus.—At Belmont Place, a few days since, we noticed a beautiful species of the hibiscus in bloom. The petals are of a deli-

cate straw color, and very dark just at the base; the flowers are about twice the size of the common single althæa. It is a shrubby species, and requires the heat of the stove to produce its truly superb blossoms in perfection.—*Conds.*

Cashmere Goats.—Mr. J. Donaldson Kinnear, of Albany, N. Y., has lately received from his friends in France, a fine doe, which was sent, together with a buck, from Havre, in one of the regular packets to New York. The length of the passage was, however, so great, that the latter died. Mr. Kinnear is in hopes of soon replacing his loss. These rare animals were procured from the only flock in France, at a high price, and are the first ever imported into the country. There is no doubt but our climate is favorable to their increase, and we hope that the manufacture of the elegant Cashmere shawls will yet become as general as that of silk is expected to be.—*Conds.*

Gardénia radicans.—Can any of your readers inform me of the best method of growing this plant? The plants in my collection look yellow and sickly, and rarely, if ever, show blossoms.—*Yours, An Amateur.*

ART. IV. *Massachusetts Horticultural Society.*

Saturday, May 7th, 1836.—This meeting was held upon business relating to the Society.

Read. A letter from M. A. Poiteau, of Paris.

Presented. Pomonomie Belge, from Dr. J. B. Van Mons, of Lorraine, in Belgium. A pamphlet on the Theory of Dr. Van Mons, one on Vegetable Physiology, one on the culture “d’ananas,” or the pine-apple, and the Bon Jardinier for 1836.

Distributed. Seeds received from China, and presented to the Society, by Bryant P. Tilden, Esq., of Boston.

The President of the Society made some very pertinent remarks upon the services which Dr. Van Mons and M. Poiteau, together with M. Soulange Bodin, had rendered to the science of horticulture, and more particularly of the theory of Van Mons, of “ameliorating fruits by seed.” He stated that the Horticultural Society of Paris had recently offered a premium of a thousand franks with a view of obtaining, by a repetition of the experiments of Van Mons, or by any other process by seed, ameliorated varieties of pears and apples. He also suggested to the Society the importance of similar experiments by the horticulturists of this country with the hope that new and very superior kinds of fruit might be produced.

May 14th.—Exhibited. Belmont apples, a very superior variety in beauty and flavor, from C. H. Homstead, Cayuga county, Ohio. Originated on the borders of Lake Erie.

Distributed. Scions of the Belmont apple, from C. H. Homstead, Esq., of Cayuga co., Ohio.

ART. V. Quincy Market.

<i>Roots, Tubers, &c.</i>		From	To	<i>Squashes and Pumpkins.</i>		From	To
		\$ cts.	\$ cts.			\$ cts.	\$ cts.
Potatoes :				West India, per cwt.		3 00	4 00
Common, { per barrel,		1 00	1 25	Common crookneck, per cwt.		none.	
		37½	50	Lima, per cwt.		none.	
Chenangoes, { per barrel,		1 25	1 50	Palermo Squash, per pound,		none.	
		50	62½	Pumpkins, each,		none.	
Eastport, { per barrel,		2 00	2 50	<i>Pot and Sweet Herbs.</i>			
		1 00		Parsley, per half peck,		50	75
N'a Scotia, { per barrel,		2 00	2 25	Sage, per pound,		17	20
		75	1 00	Marjoram, per bunch,		6	12
Turnips :				Savory,		6	12
New, per bunch,		12½		Spearmint,		6	
Yellow French, per barrel, ...		1 00	1 25	<i>Fruits.</i>			
Onions :				Apples, dessert :			
Common, { per barrel,		none.		Common, { per barrel,		none.	
		2 00				per bushel,	none.
			10			per barrel,	none.
New, per bunch,		4	6	Baldwin, { per bushel,		none.	
Beets, per bushel,		1 00				per dozen,	25 50
Carrots, per bushel,		1 00	1 25	Russets, { per barrel,		2 50	
Parsnips, per bushel,		75				per bushel,	1 00 1 50
Salsify, per bunch,		12½		Pears :			
Shallots, per pound,		20		Winter, { per barrel,		4 50	5 00
Garlic, per pound,		14				per peck,	75
Horseradish, per pound,		6	10	Cucumbers, each,		12½	25
<i>Cabbages, Salads, &c.</i>				Quinces, per bushel,		none.	
Cabbages : per dozen.		none.		Pine Apples,		25	50
Brocoli, each,		none.		Grapes :			
Cauliflower, each,		none.		Malaga, per pound,		37½	50
Lettuce, per head,		3	6	Cranberries, per barrel,		9 00	
Radishes, per bunch,		3	6	— per bushel,		3 00	
Spinach, per peck,		12½	17	Oranges, { per box,		2 00	2 50
Dandelions, per peck,		12½	17			per dozen,	25 37½
Dock tops, per peck,		12½		Lemons, { per box,		2 25	2 50
English Sorrel, per half peck, ..		25				per hundred,	1 00 1 25
Water Cresses, per half peck, ..		25		Chestnuts, { per barrel,		none.	
English Mustard, per half peck, ..		12½	17			per bushel,	none.
Asparagus, per bunch,		8	12½	Walnuts, { per barrel,		3 00	3 50
Rhubarb, per pound,		6	12½			per bushel,	1 50 1 75
Celery, per root,		none.		Almonds, per pound,		12	14
Scyllies, per bunch,			6	Filberts, per pound,		4	6

REMARKS. Since our last, the continued cold and damp weather, accompanied with easterly winds, has had considerable influence upon the early productions for the market. Almost every variety of vegetable is far more backward than last season, and the want of warm weather has rendered them less excellent than they are generally. Should the present weather continue any length of time, peas and other vegetables which we generally get early in June, will not this season be brought in till the latter part of the month. Potatoes remain about the same as in our last; there is a fair supply. About 600 bushels in bulk of Nova Scotia, generally termed white blue-noses, arrived the last week; they are very superior, and command a good price. Old turnips are done for the season. A few bunches of new ones, the first of this year, were brought in this week; they were of good size. French turnips are in some demand, but there are few to be had. Onions of last year's stock are exceedingly scarce, and what there is on hand readily command the prices in our quotations; new ones come in now tolerably plenty. Beets and carrots have advanced considerably; very few are to be found. Parsnips continue plenty. Cabbages are all out of the market. Lettuce and radishes are very abundant and good, the past weather having been very favorable for their production. Spinach, dock, &c., for greens, are plenty. Among the new things which are coming into general use, we

may mention water cresses, English sorrel and English mustard; these, with the exception of the former, have been brought in tolerably plentiful, and seem to be much liked by purchasers; water cresses, we think, will take the precedence. Asparagus comes to hand very slow, and the price keeps up, and will continue to until warm weather; it has been difficult to supply the demand. Rhubarb is abundant; immense quantities of this fine vegetable are now used, and it has become one of the staple productions of the market gardener. No squashes now remain on hand, except the West India; they are not considered as good as usual. Apples are extremely scarce, and very few, excepting russets, are to be found in the market; Baldwins are sold by the dozen, and what few there are, readily command the price in our quotations; apples of all sorts have not kept well this spring. Cucumbers are very plenty for the season, of good quality, and to be had at moderate prices. Pine-apples have not yet arrived in very large quantities. Cranberries are scarce, and but a few barrels constitute the stock on hand. Oranges and lemons are plenty.—*Yours, M. T., May 25th, 1836.*

ART. VI. *Meteorological Notices.*

FOR APRIL.

THROUGHOUT the month of April the weather was pleasant and rather fine for the season. There was two or three light snow storms in the previous part of the month, and some rain fell in the latter part. The prevailing winds, as usual in our climate in the spring months, were from N. E. to S.

THERMOMETER.—Mean temperature, 40° 0'—highest 70°; lowest 16° above zero.

WINDS.—N. one day—N. E. two—E. six—S. E. six—S. six—S. W. three.—W. one—N. W. five days.

Force of the Wind.—Brisk, ten days—light, twenty days.

Character of the Weather.—FINE, twelve days—FAIR, nine days—CLOUDY, nine days.

Rainy, four days—Snowy, two days.

MONTHLY CALENDAR
OF
HORTICULTURE AND FLORICULTURE,
FOR JUNE.

FRUIT DEPARTMENT.

Grape Vines in the green-house or grapery will now have set their fruit, and will need continual attention. Syringe the vines every other day, if fine weather; omitting it during all dull and damp days. If the vines are growing rapidly, they must be often looked at, and all superflu-

ous shoots cut away. All the lateral shoots, two eyes beyond the clusters of fruit, should be cut off, so as to throw all the sap into the fruit, and also to let the light and air freely to it. If dry weather ensues, the borders outside of the house should have a good watering once or twice a week; making use of liquid manure, occasionally, if at hand. Attention must at all times be given to the border; if it has not yet been well manured, from the accumulation of other work in the garden requiring immediate care, it may be done this month.

Vines in the open air will be in bloom this month, and will begin to make rapid growths. Keep the branches laid in at good distances, and not suffer them to run together in confusion. Large branches may now be cut away without the vines bleeding in the least.

Grape eyes put in in February and March will now have made vines two feet high; they should now, if not done before, be shifted into number four pots, or turned into the open border where wanted for standard plants.

Strauberry beds will now require attention. Keep the runners cut off if strong plants are wanted, and lay short hay underneath the vines to prevent the fruit from getting beat into the ground by heavy rains.

Gooseberry bushes will require looking over. If any mildew appears, syringe with sulphur water.

Plum trees in bearing will soon begin to drop their fruit in those gardens infested with the curculio; let every one be picked up and carried where they will be destroyed. For some excellent directions on the management of this tree, see pp. 161 and 207 of the current volume.

FLOWER DEPARTMENT.

Dahlias may still be planted with perfect success. Procure plants that are started in pots, and turn them immediately into a good deep rich soil in the border. We have known very small plants set out as late as July, to flower abundantly throughout the months of September and October.

Cuttings of green-house plants may now be put in.

Perennial flower seeds may still be sown, and the plants will bloom finely the next season.

Ranunculuses, tulips and hyacinths should be taken up the latter part of the month.

Green-house plants generally should be removed into the open air, and placed in a situation sheltered from the wind and where the noon-day sun does not penetrate. Place them on boards, bricks, or coal ashes, so that the worms cannot enter the pots.

Ericas should be repotted before they are taken out of the green-house, or they are apt to be injured by the drying winds and hot sun.

Carnations will now be advancing their flower stems, which will require occasional tying up.

Salvia splendens, and the other species, may yet be propagated.

VEGETABLE DEPARTMENT.

Radishes may still be sown for a succession.

Lettuces should continue to be sown for second crops. Transplant into rich soil to obtain large heads.

Lima Beans should now be sown. The cold and damp weather of last month destroyed the first sowing.

THE
AMERICAN
GARDENER'S MAGAZINE.
JULY, 1836.

ORIGINAL COMMUNICATIONS.

ART. I. *On the Cultivation and Management of Peach Trees in Pots.* By the CONDUCTORS.

THE cultivation of peach trees in pots, has, with English amateurs and gardeners, been practised for many years, and considerable quantities of fruit are thus annually obtained. Knight, Nicol and others have published the results of their experiments, from the success of which we may infer that, though not a profitable way of furnishing the table with fine fruit, it is, nevertheless, an agreeable and interesting one. Some gardeners produce all their peaches in this manner (see I. p. 266), year after year, and treat the plants in the same manner as lemon and orange trees.

In this country, where the peach tree springs up from the seed, and produces its fruit without any care or labor, especially in the Middle and Southern states, it may be thought useless to bestow so much attention on it as would naturally be required, when grown in pots or boxes. It may seem to many as devoting time and labor to a useless purpose ; and that horticultural zeal or enthusiasm only would ever carry one so far as to cultivate a tree in a pot, to produce its few dozen of fruit, when, from one growing in the open garden, bushels could be procured. This might be truly said to be the case, if no other object was gained. In large gardens, trees may be planted which will produce plenty of fruit, in the usual season ; but, in very small ones, there is not often room enough to plant a single tree : to the former the cultivation of trees in pots will be valuable, as, with the assistance of a green-house, fruit may be picked a month or six weeks earlier ; and, to the latter, they are equally valuable, as fruit can be ob-

tained, from a few pots of plants, sufficient to supply the wants of a small family. In our climate, the peach tree is now very little cultivated ; from the effects of our long cold winters, from diseases, insects, soil, and other causes, it has been sadly neglected, and if the same inattention is continued, it will not be many years before there will scarcely a tree be found in our gardens. We are sorry to see this state of things, as we believe that the peach, with a little *proper* care, will flourish much better in our gardens than many suppose. Diseases and insects are allowed to increase *ad infinitum*, and the death or unhealthy state of every tree is laid to the severe climate. But as we are not writing upon the culture of the peach tree as a standard, in the garden or orchard, we return to our subject.

The value of peach trees in pots is exceedingly great to those persons who possess stoves and green-houses ; as a succession of fruit may be produced the year round. The habit of a tree, by proper care, may be wholly changed, so that it will put forth its leaves and blossoms at the same time that trees naturally produce their fruit. Thus, with a few trees, this desirable object may be obtained. In gardens where there are green-houses alone, fruit may be picked from four to six weeks earlier than from the garden ; and even without a pit or green-house, but only a warm dry cellar, the fruit may be forwarded fifteen or twenty days, and with the certainty of a crop. The plants can be placed in a warm situation during the warm days of March and April, and, if any danger is apprehended from frost, they can easily be removed to a sheltered situation. We have had considerable success in cultivating a few plants, and the results of our observations we now offer to our readers, with the hope that it may assist those who are desirous of procuring this delicious fruit every season, in growing and managing their plants.

There are various methods of procuring the plants—many preferring one year old from the bud, others two, and some three ; for ourselves, we do not approve of either, unless there is need of great haste, in order to fill up the spare room in a new green-house or grapery. We know it is the general custom to procure budded dwarf plants from a nursery ; but this we do not approve of, except in certain cases. As, however, some persons may purchase such, we offer a few remarks on their management,—afterwards detailing our method, as taken from our memoranda.

When trees are selected from the nursery for pots, choose those which have been budded as near the soil as possible, and which are either upon their own or almond stocks, and one year old. The branches should be tolerably numerous, and spring out at regular distances on the stem. Be careful and select such as are free from *borers*, gum, canker, &c. They should also be

taken up carefully, preserving all the smaller roots. When they are to be potted, cut off the largest woody roots, and coil the middling sized ones round the pot ; fill in the compost, and spread out the small fibres as regularly as possible. Give the pot two or three hard knocks to settle the soil. The branches should then be cut in to within four or five inches of the stem, being careful to perform the operation at a prominent wood-bud : after this the plants may be set in a warm situation, and watered as often as required ; they will soon commence growing, and will make strong shoots and flower-buds the first season. The succeeding management is the same as will be detailed below.

The method we have adopted, and which we believe to possess many advantages over others, though requiring a little longer period to bring to maturity, is, to raise the plants from the seed. Peach stones can be procured almost anywhere, and it is immaterial how poor the kinds from which the plants are raised ; they are merely wanted for stocks. Let them be collected together in the fall of the year, and laid away for planting in the month of November. At that time they should be sown in a bed in rows, about three or four inches apart, and covered an inch or more in depth. No other care is requisite through the winter ; and in the month of May the plants will make their appearance above the soil. About the first of June, when they will be two or three inches high, with eight or ten leaves, preparations should be made to pot as many as there are trees wanted, allowing an overplus, as some may not grow very well, and, perhaps, a few of the buds will not take. For this purpose, have ready a quantity of sandy loam and leaf mould, in about equal parts, for a compost, and the pots, of the fourth size (seven inches wide by seven deep). Place some potsherds over the hole at the bottom, and partly fill the pot with the prepared soil ; then take up the plant carefully, and transfer it to the pot, filling up round it with the compost, giving the pot two or three gentle taps, to settle the soil well, and finish with a good watering through a fine rose water-pot. The plants should then be placed in a warm shady situation for a week or two, until well rooted, when they may be removed into a sunny aspect, and the pots plunged up to the rims in the soil. Throughout the summer they should occasionally receive supplies of liquid manure, and the pots kept free from weeds. When only five or six plants are wanted, they may generally be found in the garden, where they often spring up from seeds, which are carried in with the manure. They should be potted in the same manner as above recommended.

By the middle of the month of August they will, if properly treated, have gained the height of twenty inches or more, with shoots as large as a pipe-stem, and of sufficient size for budding. The lower leaves should be stripped off to the height of eight or

ten inches, a few days before inoculation. Buds should then be procured, of the best kinds, suitable for pot culture, and immediately inserted, choosing a dull cloudy day for the operation, and performing it very skilfully, as the stocks are so small that the buds will not unite quite as freely as on those two years old. Various sorts have been recommended as being the most prolific, and the following may be enumerated as preferable :—

Millett's Mignonne,
French Mignonne,
Violette hâif,

Early Admirable,
Bellegarde,
Royal George.

Those that we have tried are as follows :—

Royal Kensington,
Belle de Vetry,
Teton de Venus,

Noblesse,
Bellegarde,
Alberge Royal.

All of which were selected from the nurseries of the vicinity. The Noblesse was not the true kind, and there are some doubts of one of the others. The Brunion nectarine, of which we budded one plant, produces fine crops in pots, and is a delicious kind. Particular pains should be taken to procure the sorts true to their names, and thus save much disappointment. After the buds are inserted, the plants may remain in the same situation, until severe frosts occur in the fall, when the pots should be taken up, to prevent their being broken, and placed in the cellar; if any roots run through the holes, they should be cut off. The plants will not need water more than two or three times through the winter.

In the spring of the year the plants should be taken out of the cellar, and, if convenient, put into a hot-bed or green-house, to give the buds a good start; head off the shoots three or four inches above the buds; when these have made a growth of a few inches, they should each be tied to small sticks, to prevent their being injured by the wind, or other accidents. Continue to supply the plants freely with water, and the buds will make a vigorous growth.

Preparations should now be made to repot the plants into the pots in which it is intended to fruit them. For this purpose they should be twelve or more inches wide at the top, and about the same in depth. Tubs and boxes answer very well, but they are not, in our opinion, so suitable as pots; they do not last long, and their appearance is not so neat. Having the pots in readiness, proceed to mix the compost, which should be composed of rich loam, leaf mould, sand, and old mortar or brick rubbish, in about the following proportions :—one third loam, one third leaf mould, one sixth sand, and one sixth lime or brick rubbish. Let these be thoroughly incorporated together, if convenient, about a week or fortnight before wanted for use. When all is in readiness,

shift the plants into the large pots ; turn them out of those they were budded in, and, placing them in the large size, fill up round the balls of earth and roots with the compost, giving the pot several hard knocks, to settle it well ; finish with a good watering, and place the plants in a half shady situation for a few days, at the end of which period they may be removed to the warmest part of the garden, and if there is plenty of room, the pots may be plunged in the ground, which will save considerable labor. Liquid manure should be applied, at least once a week, and its effect upon the plants will be quickly perceived. They will soon make a vigorous growth, and, in the course of a few weeks, if the main stem does not branch out of itself, it should be pinched off, so as to make it throw out laterals ; a sufficient number of these should be retained to form a handsome head, and the remainder rubbed off. Throughout the summer they will require no other attention than watering and occasional inspection of the plants, to see that they are in a healthy condition.

Upon the approach of severe weather, the pots should be removed to the cellar, as in the first season. It is immaterial, at this age of the plants, whether the frost penetrates or not, provided it is free from dampness ; they will not, in such a situation, need any care until spring ; and if the soil is dry, it may be allowed to freeze hard the winter through, and the pots will not be broken, nor any injury done to the trees. Whenever it is wished to excite the buds in the spring, the pots must be removed to a proper place, which may be in the green-house, grapery, or pit, or, in the want of either of these, a warm room. Give the soil in the pots a good watering when they are taken from the cellar.

The management of the trees differs in different situations, and according to the earliness of the season in which they are excited into a growing state. Thus, in stoves in the months of January or February, it would be rather difficult to set the fruit, and a considerable knowledge of forcing would be required, to ensure the certainty of a crop ; but later in the season, in March or April, when the object is only to assist nature in her operations, rather than to force her, no more care is necessary to ensure an abundant supply of fruit, than is given to the ordinary plants of the garden. Indeed, if water is duly supplied, the trees set in an airy place and properly pruned, we do not know that there is any obstacle in the way of the cultivator. We shall, therefore, at this time, confine our remarks to their treatment, which is very simple, when the latter object is in view.

Pruning.—In pruning trees in pots some care is requisite : cut out all the superfluous branches, in the centre of the tree, and also head off all the very strong shoots—as the finest fruits are produced on the middling sized branches. Always prune with an eye to the succeeding years wood and crop, and not let the

trees run up tall and straggling, and thus occupy much room ; but rather keep them dwarfed as much as possible, and never obtain a greater height than five feet, with a good shaped head. Peach trees always produce their fruit on the previous year's wood, and if the gardener bears this in mind, he will never allow any old useless wood on the trees, but will always have them present a green and vigorous appearance.

Watering.—Give supplies of water every day when the pots are placed under cover, or not plunged in the ground ; twice a week, after the fruit is *set*, liquid manure should be applied ; and if the surface of the soil is covered with an inch or two of coarse manure, it will serve to prevent evaporation and strengthen the plants. The trees should also be syringed, when under cover, two or three times a week, and if in the open air, at least once a week, throughout the season.

Air.—In the first stage of the putting forth of the blossoms, not but little air should be admitted ; but as soon as they show signs of opening, it should then be given in large quantities. Syringing should also be omitted until the fruit is set. By this time the season will be so far advanced, that if they are in a green-house or grapery, the air that is usually given to the other plants will be sufficient for the peach trees.

Fruiting.—When the fruit begins to color, the watering should be partially withheld ; and when it assumes nearly a ripe state, still less quantities must be applied. By this means, the cultivator has it in his power to give the fruit a fine flavor, which those grown in the ordinary method seldom or never acquire. We never tasted finer specimens of peaches than those we have raised in pots. The heavy rains which frequently fall in our climate in the month of September, often renders a large part of those produced on trees in the garden very inferior in flavor.

Insects.—The insects which do the most injury to the peach tree are the *borer* (*Ægeria exitiosa*, *Say*), the *curculio* (*C. nuphar*, *Herbot*), and the *aphides* (*Aphis rosæ* *L.*) The first is the most destructive, not only to the peach tree, but also to the plum, the apple, &c. The eggs of this insect are laid on the bark, at the base of the stem, and, as soon as the grub hatches, it eats its way under it, and continues to bore down and around the stem, until it has, in fact, girdled the tree, thus causing its death. The first sign that they infest a tree is the appearance of gum, at the surface of the soil in the pots, immediately around the stem. As soon as this is perceived, they should be cut out with a sharp-pointed penknife ; and if they have penetrated far down, a small wire should be run in to destroy the insect. The trees should be often looked over, in order to keep them free from their depredations—as we do not know of any certain preventive. The *curculio*, which may be described as a small

beetle of the *coleoptera* tribe, is at present extremely troublesome in some districts, and whole crops are destroyed. The only preventive is, to destroy the insect in its larvæ state, by having every fruit picked up as soon as it falls from the tree, and given to the hogs, or otherwise disposed of, in a manner which shall prevent the insect from passing into the chrysalis state. By giving strict attention to this, its ravages will soon be impeded, and plenty of fruit preserved. The *aphides*, or *aphis*, do not touch the fruit, but injure the tree very much, by stopping the growth of the young shoots, and, consequently, prevent their forming flower buds; the trees also have a very disagreeable appearance. Several methods have been suggested to stop their increase; but, when the trees are large, it is almost impossible. On trees in pots, however, they can be more easily got rid of—by the frequent use of water, saturated with tobacco, in the proportion of half a pound of the latter to a gallon of the former: turn the water on the tobacco, boiling hot, and when it is cold, syringe the trees with it; if they are very thick upon the extremities of the young shoots, dip them into the mixture for a few minutes, and it will soon destroy them. By continued attention to syringing of the trees with pure water, as we have before recommended, they do not increase very fast, and are not very troublesome to trees in pots. If from neglect, however, they attack them, this remedy should be applied.

Diseases.—The peach tree is subject to some diseases, which generally arise from a bad soil, or from injudicious management. That of the most common occurrence is the gum or canker. Trees planted in cold, stiff, wet soils, may be often observed with half or the whole of the branches covered with gum, which oozes out from around the buds, in most instances, but frequently from the wood between them. We have never been troubled with this disease in the short period which has elapsed since we have given attention to the cultivation of the peach in pots, which we attribute principally to the peculiar kind of soil, which, it will be remembered, was quite *sandy* and open; but it may appear where attention has not been paid to the soil, and where there has been mismanagement. The best method of putting a stop to its increase, if it once appears, is, to repot the trees in a new soil, made rather more sandy than we have recommended; cut away some of the large roots, and also head in the branches quite short; give the trees plenty of air, and, with due attention to water, &c. they will generally recover. It may be well here to observe, that the soil which we have used and which we have recommended, though seemingly too poor for trees in pots, contrary to the general rule, in which the compost is made doubly rich, is one peculiarly fitted for the peach tree, and one in which we have ever had an extremely vigorous growth of wood, and a good crop

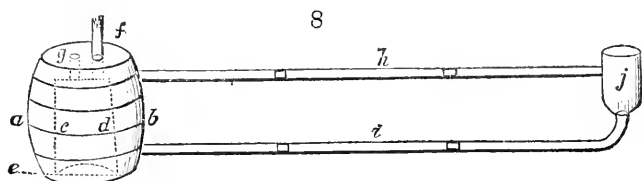
of fruit. With that important ingredient in horticulture, liquid manure, which can be withheld or applied *ad libitum*, the cultivator has it in his power to produce either a strong or a weak growth; the soil is entirely under his management; but if the soil was made rich at first, its exciting quality could not be easily taken away. *Mildew* often strikes peach trees in green-houses, and we have seen them almost white with it: it has been supposed, by some scientific cultivators, to arise from the soil and situation, and we are inclined to the same opinion. Although we have not been troubled with it, nor do we believe it will ever make its appearance on trees in pots, we mention it as among the diseases peculiar to the peach. It is one gratifying fact, in favor of the culture of peaches in pots, that they are but little subject to diseases. The facility with which insects are destroyed is also a great inducement to their cultivation.

Though we have extended our remarks to a much greater length than we at first intended, we could not well have given our ideas in a much less space; considerable may yet be said on the management of the trees after the third year; but as this mostly relates to pruning, we trust the good judgment of every cultivator will, with our hints on this subject, gather sufficient information to guide him in his future practice. We hope our observations will have a tendency to extend the growth of this delicious fruit in pots. We have endeavored to simplify their culture as much as possible, in the desire we have to see every gentleman place on his table a tree loaded with peaches, to be plucked, fresh and ripe, from the tree.

ART. II. *Descriptive Notice of Mr. Hogg's new Method of Heating by Hot Water.* By A. J. DOWNING, Botanic Garden and Nursery, Newburgh, N. Y.

WE have lately examined, with much satisfaction, a highly improved furnace and boiler, for circulating hot water by the level system, which is the invention of Mr. Hogg, junior, and which we had the pleasure of inspecting at Mr. Hogg's garden, New York. Annexed is a view of which: *a, b*, (*fig. 8*) is a strong, iron-bound, wooden cask, air-tight except through the tubes *h, i*, which contains the furnace, and serves as the boiler: *c, d*, is a conical cast-iron furnace for burning anthracite coal:

e, the grate at the bottom of the furnace, beneath which an ash pit should be formed : *f*, the flue or smoke-pipe : *g*, the aperture for introducing the fuel : *h*, *i*, cast-iron pipes of three inches diameter, for the circulation of the hot water ; and *j*, an open



reservoir, through which the tubes and boiler are kept constantly supplied with water. Those who are not acquainted with the level system of warming by heated fluids, will, by looking at the figure, readily perceive that, upon filling the furnace *c*, *d*, with a proper quantity of fuel, the water in the boiler, becoming heated, rises and flows off through the pipe *h*, to the reservoir *j*, whence, becoming cooler, it returns immediately through the pipe *i*, to the bottom of the boiler ; and so long as the supply of water and fuel is kept up, the circulation is unceasing. The great improvement in the present apparatus consists in placing the furnace *in the midst of the body of water*, which completely surrounds it. The rapidity with which the water is heated, and the economy of fuel, are the two very important points gained. To these may also be added the small space occupied by the whole fixtures, and the convenience of its introduction, in desirable cases, in concealed situations, within the hot-house itself, as it is by no means necessary to construct a separate apartment for the furnace and boiler, as they may be placed wherever an ordinary cask would have room to stand.

We could wish no better proof of the thorough competency of this application for warming the air of hot-houses to any desirable temperature, than that which we witnessed at Mr. Hogg's garden. An apparatus of moderate dimensions was put up last autumn in a hastily and *slightly constructed wooden house*, fifty or sixty feet in length, which, with its joints open to every wind, and without any external covering upon the glass, was kept at a temperature of 50° with the greatest facility, during the coldest weather, the thermometer ranging meanwhile from 8 to 10° below zero, *Fahrenheit*. We believe Mr. Hogg, junior, is about patenting his excellent invention, and we cannot refrain from expressing our conviction, that it will (jointly with other systems of heating by hot water), in a great measure, if not entirely, supersede the common brick flues, so drying to the atmosphere of plant-houses, and so deleterious in the escaping smoke to the plants themselves.

A number of the above boilers and tubes have been erected, under the superintendence of Mr. Hogg, in the neighborhood of New York, in the conservatories and green-houses of different gentlemen, where, as we learn, they have proved highly satisfactory.

Yours,

Newburgh, N. Y. June 6, 1836.

A. J. DOWNING.

The apparatus for heating green-houses, as described above by our valued correspondent, appears to us to combine many advantages for ordinary forcing-houses, green-houses, graperies, &c., and we are happy in thus early laying before our readers this new invention. One great objection to the erection of green-houses, and similar structures, for the protection of plants during our severe winters, is, the expense attendant upon heating them. Nothing can surpass the system of heating by hot water ; yet the first cost of the erection of the apparatus which is required by the common method is so great, that many are induced to continue the old smoke flues, and others are forced to forego the pleasure to be derived, in our dreary winters, from the green-house. Every new invention or discovery which will in any way lessen the expense of warming such structures, will tend to cause their erection, and thus create, by the spread of a taste and a desire for plants, a demand for the products of the nurseryman.

In this wonderful age of improvements, all new inventions, unless they are such as have cost the inventor years of labor and perseverance to bring them to perfection, should be public property. The patent law, in some cases, may be of considerable benefit to projectors of improvements, but so common have the applications become for such protection as it was intended to afford for inventions, that it consists now in but little more than the name. If the system of heating by hot water, as invented by Mr. Hogg, junior, is of such real utility as it appears to be, to horticulturalists and florists, it would certainly be the most judicious course to pursue, to bring it extensively into notice, and, by cheapening the cost of erection as much as possible, induce amateurs and lovers of gardening to build green-houses, graperies, &c. We do most sincerely hope that Mr. Hogg will give up the intention, if he has ever had any, of patenting his invention. As a nurseryman, we should never think of his doing so ; and we have too high an opinion of his good judgment to believe he will. This improvement, however so great, cannot certainly be believed, in this age, to be the *ultimatum* of heating green-houses by hot water ; and there may yet be discovered other and better modes. We should wish Mr. Hogg to reap some benefit for his discovery ; and we have not the least doubt but the increase of floricultural taste, which will in a greater or

less degree take place, as a knowledge in relation to it is diffused, will create such a demand for plants, that Mr. Hogg, as well as every nurseryman, will find that he will be a gainer by not confining his improvements by any law.—*Conds.*

ART. III. *A few Remarks on the Treatment of Cyclamens.*
By S. SWEETSER.

THIS very beautiful bulb, though by no means a rare plant, is far, however, from being common, or at least, is very seldom seen in flower. I have a few plants, which, with no particular care, produce forty or fifty flowers each, every season; and if the following remarks will render its culture less difficult, they are willingly at your disposal.

The compost I have made use of for cyclamens is composed of nearly the following kinds of soils:—loam, dung, leaf mould, and sand—the latter in not quite so large proportion as the three former. After the bulbs have done blooming, or have made their growth, in the spring, they should be turned out into the border, in the garden, and planted in a warm, unshaded aspect, in a rich spot, if not naturally so—loam and leaf mould, with sand, should be added. Set them an inch or more under the surface of the soil.

During summer they should receive supplies of water, in dry weather, and the soil occasionally loosened round the bulbs. About the latter end of August or beginning of September, the plants should be taken up into pots. The proper size for good strong roots is number four; smaller ones may be put in the next size below. Use the compost recommended above, and take the plants up carefully, placing one in each pot; settle the compost well, by giving the pot one or two gentle taps, and set the plants away in a half shady place for a few days. Afterwards inure them to the sun, and when the other plants are removed to the green-house or parlor, take these in also. During the winter keep them in an airy place, and give them moderate supplies of water. Toward spring they will begin to throw up their flower stems, when they must be supplied more liberally with this element; water every day in dry weather, and the plants will grow rapidly and throw up from forty to fifty flower-buds;

set them where they will receive plenty of air, to prevent their being drawn up, and they will make an elegant appearance.

When the flowers have all appeared, the bulb should again be turned into the border, as I have recommended ; the same attention should be given, and the plants taken up in the fall : they will perhaps need a larger pot this year, which should be given them, if they do. Use the same compost as in the previous year, and treat in the same manner, and a handsome bloom will be the result. Seeds are sometimes obtained, and plants may be raised in this manner. I have sown some this year, and shall, at some future time, give you my method of treating them. These few remarks are intended to apply to old roots.

Yours,

Cambridgeport, May, 1836.

S. SWEETSER.

ART. IV. *On the Cultivation of several of the most beautiful Species and Varieties of Cactus and Cereus.* In a series of Papers. BY J. W. RUSSELL.

THE *Cereus speciosissimus* is far more robust in its habit of growth than the *C. grandiflorus*. The stem of the plant is quadrangular, or four-sided ; and, when in a healthy state, the young growths are of a brownish color, which is a good criterion, for any one who is unacquainted with its habit of growth, to judge of its vigor.

One of the most important points in this genus of plants is, in keeping them in a high state of health, for such always produce the largest and most elegant flowers. It should be remembered, that all succulent plants, or plants similar to the one I am now speaking of, imbibe moisture very copiously in damp weather, and part with it very sparingly in hot weather ; and any one who is not already acquainted with this fact, or has not yet observed this much, can never expect to rise above mediocrity in the cultivation of this tribe ; we have no foliage that wilts down when the roots are perishing with drought, as in most other plants, but the stem will in a little time become soft to the touch, and the meagre, shrivelled appearance, so much complained of, is nothing more nor less than the result of bad treatment. Immediately after a few cloudy damp days, plants, in a healthy state, generally wilt considerably, when the sun breaks out suddenly with intenseness

of heat, although at the same time the roots are probably saturated with moisture. The compost recommended, for the night-blooming *cereus*, in my former paper, should be used for this and all other plants of this genus. The old custom of making a compost of lime rubbish, sand, and a portion of soil, it may be argued, has been in use nearly a century, and that numerous instances can be cited of the success of different individuals. Nevertheless, I know of no reason why we are not at liberty to try some new mode of culture, if out of the common track; and I am convinced that whoever will try the compost (which, by the by, is as cheap and as easily procured as any other), will meet with ample remuneration for his trouble.

This very desirable plant puts forth its flowers in the months of June and July, sometimes in May, as a great deal depends on the temperature of the house the plant is grown in. Size of the flowers four or five inches in diameter: color a beautiful crimson, the inner petals elegantly shaded with purple: the stamens, which are numerous, are bundled together, and are as long as the petals of the flower. The styles and anthers are white, and present an elegant contrast with the other parts of the flower. By shading the flowers from the hot sun, they may be kept in full bloom four or five days. The plant should be placed in such a situation, in the green-house, that there will be a free current of air to every part of it, and by no means allow other strong growing and straggling plants to overshadow it. No hot or green-house collection can be called complete without this splendid species.

Some cultivators recommend the drying up of the plants, to force them to flower more abundantly; this is what I call flowering the plant prematurely,—for even if a few more blossoms are obtained, which I have my doubts of, the yellow, sickly appearance of the plant when thus treated, is enough to condemn the practice.

This species is easily propagated by cuttings, and a strong healthy one is preferable to a sickly plant; and if carefully packed in soft paper, and placed among clothes in a travelling trunk, or among any kinds of dry goods, could be taken to almost any distance required. All that is necessary, after taking the cutting from the plant, is to lay it on a shelf in a dry room, two or three days, so that the wound may heal over.

A cutting such as just mentioned, will, with good treatment, probably flower the second year. The dark-brown vein, that leads from the centre of the stem to the bud, which may be immediately observed, is almost a sure sign of a flower. I say *almost*, because sometimes it turns out to be a lateral growth. In order to force the plant to flower, it is recommended by some cultivators to cut off about half an inch of the extremity

of the shoot ; this often has the desired effect—although it is frequently the case that the plant, by thus stopping it, is stimulated to make lateral *growths*.

Yours,

J. W. RUSSELL.

Mount Auburn, Cambridge, May, 1836.

ART. V. *Calendar of Plants and Shrubs in bloom from the month of May to October, inclusive.* By the CONDUCTORS.

WE frequently hear the question asked, what plants and shrubs are in flower during the months of May, June, July, &c., in the open garden ; and what kinds, especially of perennials, will present a good display in a small garden, in each month throughout the season ? With the hope that we may in a measure answer these questions, and at the same time contribute some information to our readers, we have looked over our horticultural memoranda, where we have noted down much that is useful as well as interesting, and selected such plants and shrubs as we have, upon the average of several seasons, found in bloom in each month. Frequently, from the prevalence of cold easterly winds in the month of May, or from the effects of late frosts, many plants, which, in some years, are in full flower early in the month, do not expand, in others, until the latter part, or even until June. But as these backward seasons are few, and do not occur oftener than once or twice in the course of several years, these observations may be considered as applying to seasons in general. In July and August, we have never observed scarcely any difference in the period of the blooming of plants, however so early the season commenced, or how protracted during the months of April or May. In July, vegetation is sufficiently rapid to make up for the slowness of growth in the spring months, and it is only through the former that occasionally our gardens are unattractive, and barren of bloom.

We have often thought that a catalogue of perennial herbaceous plants, drawn up, with the season of the flowering of each species and variety, would be very useful to persons who are desirous of purchasing plants to ornament a small garden ; and we were in hopes that some of our correspondents, more able, perhaps, from local circumstances, to do so than ourselves, would have sent in a paper upon this important subject ; but as we

have not yet ever received any such, we have ventured to commence with the results of our own observations, hoping that we shall be aided, in our future remarks, with the pens of some of our friends. It would give us much pleasure if we were able to enumerate more species and varieties; but we will suppose the garden to consist of only a quarter or half an acre of land, laid out as our gardens generally are, containing useful as well as ornamental plants, and that it is desirable to have a good selection—not of the most rare and high priced kinds, but such as can be purchased of every nurseryman, at moderate rates, and easily grown.

We shall commence our observations with the month of May, and, if not prevented for want of room, or by other engagements, shall continue them through the succeeding months, until October. At some leisure opportunity, we also hope to give a list of the most desirable and beautiful plants, which will produce a fine display of blossoms throughout the winter months, in green-houses.

May.—Of the biennial and perennial plants which flower this month, the following may be enumerated. *Phlox réptans* *Mr.* (*stolonífera H. K.*), *subulàta*, *divaricàta* and *nivàlis*; all very showy and highly ornamental kinds: nothing can exceed in loveliness of bloom the two latter species: we have seen large roots of them so completely covered with flowers, that not a green leaf could be distinguished; *nivàlis* forming a patch of blossoms as white as snow; *Aquilégia vulgàris*, with its numerous varieties, and *sibèrica*; the latter has not yet become common, but it is an elegant species, and easily raised from seeds: *Saxifraga umbròsa*, *granulàta* and *granulàta plèno*; *Lupinus polyphyllus* and *polyphyllus álba*; both splendid plants, and easily raised from seeds; all the perennial lupins are fine, and should be in every garden: *Sèdum pectinàtum*: *Iris pùmila*: *Verónica gentianoides* and *réptans*: *Sanguinària canadénsis*: *Lychnis Floscùculi*, var. *flòre plèno*; exceedingly handsome. *Polyanthuses* and *hearts-eases* are also abundantly in bloom. Of bulbous and tuberous rooted plants, the following are in flower:—tulips, hyacinths, narcissuses, fritillarias, and ranunculuses: *Pæonia paradóxica*, *officinàlis*, *præcox*, *hùmilis*, and some others, which are not yet common; these are all single, and are not to be compared in beauty with the double ones; still they are very desirable in a collection, as they flower sooner than the latter, and serve to keep up a display in this month: also, lilies of the valley. Among the shrubs in bloom are *Dáphne Mezèreum*, *Halèsia tetráptera*, *Ribes missouriénsis*, *Azàlea nudiflòra*, *Spiræa hypericifolia*, *Cydònia japónica*, the double flowering almond, lilacs, snowballs, vacciniuns and tartarian honey-suckles. All these flower in the open garden and are perfectly hardy, requiring no protection

whatsoever. Where there is a green-house, or pit, or even a good cellar, in which plants can be protected and turned into the borders early, many of them will bloom this month; such as *Clárkia pulchélla* and *élegans*, annual chrysanthemums, *Verbéna chamædrifolia*, minuluses, stocks, &c. Such shrubs as *Rhododéndron pònticum*, *catawbiénse*, *máximum*, *ábum*, *hybridum*, and others, and many kinds of azaleás, may be kept in a cellar, and will flower splendidly this month. Indeed, without the aid of a pit of any kind to protect plants, but only a good dry cellar, in which the frost cannot penetrate, a garden may be tolerably supplied with flowers in May, and plants, which it has heretofore been thought must have a green-house to winter them, and those which were not so favored, thus deprived of their beauty, will flourish fully as well, and bloom equally as freely, sheltered in this manner. We have tried the experiment, and can with confidence recommend it.

Those truly magnificent under-shrubs, *Pæónia Mouútan* var. *papaverácea* and *Bánsiæ*, though yet rare, are perfectly hardy, and flower freely in the open border, this month. They may also be grown in pots and wintered in a cellar, where the garden is small and the borders occupied with other plants. Though not to be obtained at a very low price, yet no collection can be called complete without them. In small gardens, in cities, plants which are usually kept in rooms may be set out—and, if large specimens, such as oleanders, lemon and orange trees, pittosporums, acacias, &c., they will make a fine appearance, and their health and beauty be preserved.

ART. VI. *Notices of new and beautiful Plants figured in the London Floricultural and Botanical Magazines; with some Account of those which it would be desirable to introduce into our Gardens.*

Edwards's Botanical Register, or Ornamental Flower Garden and Shrubbery. Each number containing eight figures of Plants and Shrubs. In monthly numbers; 4s. colored, 3s. plain. Edited by John Lindley, Ph. D., F. R. S., L. S., and G. S., Professor of Botany in the University of London.

Curtis's Botanical Magazine, or Flower Garden Displayed, containing eight plates. In monthly numbers; 3s. 6d. colored, 3s. plain. Edited by William Jackson Hooker, L.L. D., F. R. A., and L. S., Regius Professor of Botany in the University of Glasgow.

DICOTYLEDONOUS, POLYPETALOUS, PLANTS.

Papaveràcæ.

ESCHSCHOLTZIA.

In *Paxton's Magazine of Botany*, for April, *E. cròcea* is figured. It is a beautiful species, much more so, we think, than the old favorite, *E. californica*. The habit and character of the plant is very similar to *californica*, but the color of the flowers is a rich orange, about the same shade as the dark color at the base of the petals of the latter. We flowered this species last season, from seeds which we received from England; but the plants, only three in number, did not stand the winter; this we presume was owing to their weakness, as they were not planted out until very late in the season, and did not make a good growth before frost. We saved a few seeds, and, from them, we have several plants, which we shall endeavor to leave out next winter, in order to again test its hardiness. If it proves as hardy as its congener, *E. californica*, it will be a much more valuable acquisition, than if it was only annual in its duration.

Onagràcæ.

GODETIA *Spach* (A name, the meaning of which is unexplained by its author.)

lépida Lindl. Smart *Godetia*. An ornamental annual plant; growing a foot or more in height; color of the flowers red and purple; propagated by seeds; a native of California. *Bot. Reg.*, 1849.

A very handsome annual species of the primrose or *Ænothèra*, from which genus this has been separated by Mr. Spach, as mentioned in our last, p. 217. Described erect in its growth, leaves ovate-lanceolate; the flowers appear very thickly on the ends of the terminal branches, and are of a handsome red color, with a purple spot on each petal. Introduced by the meritorious and lamented Douglas, from California, and flowered in the garden of the London Horticultural Society, in July, 1835. Easily propagated by seeds. (*Bot. Reg.*, April.)

Rosàcæ.

CRATÆGUS

microcarpa Lindl. Small-fruited Thorn. A hardy shrub; growing ten or twelve feet high; flowers white; appearing in May and June; a native of North America. *Bot. Reg.*, 1846.

Synonyme: *Cratægus spathulata Elliott*, and of *Loudon's Arboretum Britannicum*.

In commencing to figure several species of the *Cratægus* in a fruiting state, Dr. Lindley remarks, "Few hardy plants are more deserving of general admiration for the neatness of their foliage, the diversity of their manner of growing, the beauty of their flowers in the spring, or the gay appearance of their numerous richly colored haws in the autumn, than the species and varieties of

the genus *Cratægus*." They are as yet but little known, only to collectors, and are not very frequently seen in gardens. With the hope that more attention will be given to planting the species and varieties, many of the most interesting and highly deserving of cultivation will be figured in the fruiting state, as their greatest attraction is in the ornamental appearance of their berries. *C. microcarpa* is, according to Elliot, a native of Georgia and the Carolinas; and Mr. Drummond has, also, discovered it growing in the Texas. It forms a pretty small tree, which, in the winter season, is tolerably thickly covered with small bright-red berries. Drawn from the London Horticultural Society's garden. We should be much pleased if this tribe of plants was more extensively planted in our gardens. Nothing can be more ornamental, and we hope that the notices which we shall take from time to time of these plants will call attention to the subject. (*Bot. Reg.*, April.)

heterophylla Various-leaved Hawthorn. A hardy shrub; with white flowers; appearing in May and June. *Bot. Reg.*, 1128 and 1847.

This is stated to be "one of the handsomest" of the genus. The tree forms a "dense pyramidal head, with foliage the finest of the genus," and with snow-white blossoms appearing early, and covering the tree like a mantle of flowers. The leaves are shiny, of a neat figure and firm texture; the haws or berries, which are exceedingly numerous, hang on rather pendant pedicels, and are of a rich crimson; they adorn the tree until the latest period in autumn, "harmonizing beautifully with the fading verdure of the leaves." (*Bot. Reg.*, April.)

Leguminaceæ.

KENNEDYA

Sterlingi Lindl. *Sterling's Kennedy*a. An ornamental green-house trailing plant; with scarlet flowers; appearing in April; a native of New South Wales; propagated by cuttings. *Bot. Reg.*, 1845.

Described as follows:—leaves trifoliate, subrotund-ovate, mucronate; petioles hairy; stipules ovate-acute; bracts verticillate; calyx hairy. The flowers appear on axillary peduncles, two on each, and are of a brilliant scarlet. This species is "botanically remarkable for having its bracts collected into a whorl, or even grown together into a little involucre." It was raised from seeds received from the colony, and is a native of the Swan River. The seeds were sent to England by Sir James Sterling, in compliment to whom it has been named. All the *kennedya*s are pretty, sufficiently so to give them a place in green-house collections. (*Bot. Reg.*, April.)

Euphorbiaceæ.

POINSETTIA Graham (In compliment to the Hon. J. R. Poinsett, late minister to Mexico.)

pulcherrima Graham Beautiful Poinsettia.

Synonym: *Euphorbia Poinsettia* of the gardens about Philadelphia, and the same that has been noticed several times in our previous volume, as flowering at Belmont Place in this neighborhood.

Dr. Graham, in the *Edinburgh New Philosophical Journal*, has stated that this forms a distinct type from *Euphorbia*, and has consequently given it the above name. Some other particulars are stated in regard to the plant, which we shall notice hereafter. It has flowered in several gardens in Scotland, where it was introduced from Philadelphia.

Compósitæ.

Tubuliflora. Tribe *Senecionideæ*, subtribe *Heleniæ*, division *Galinsogæ*, subdivision *Madiæ*.

OXYURA (Supposed to be derived from *sharp* and *a tail*, but its application is not obvious.) *De Candolle*

chrysanthemoides *De Candolle* Ox-eye-like *Oxyura*. A pretty annual plant; growing a foot or more in height; flower yellow; appearing in the months of August and September; propagated by seeds; a native of California. *Bot. Reg.*, 1850.

A new genus, placed by De Candolle in the order of *Compósitæ*, as above shown. According to the representation of the plate, it is a very pretty annual. The stem is erect, with lateral branches; leaves inferior pinnatifid linear obtuse, and sublobed; the flowers are yellow, with considerable of a disk, much resembling *Madia elegans*, from which, however, it is widely separated. It was introduced from California by Mr. Douglas, and flowered in the garden of the London Horticultural Society. It produces seeds in abundance, and will probably soon be introduced. (*Bot. Reg.*, April.)

Stellatæcæ.

IXORA.

I. grandiflora is figured in *Paxton's Magazine of Botany* for May. It is a splendid species, not very common, but which, with several others of the genus, should be cultivated in every stove collection. The flowers appear in large terminal corymbs, and are of a brilliant scarlet. It is a native of the East Indies, where it is said to flower the year through. It was first introduced into England by Sir Abraham Hume. Cuttings of this species strike freely in mould or sand, but the latter is preferable, in a gentle heat, under a hand-glass. The plants, when rooted, should be potted off into a compost of turfy loam, peat, and sand, in equal quantities.

We saw a species in flower, a few days since, at Belmont Place, which we believe was *I. rosea*. It was covered with beautiful corymbs of rose-colored blossoms. The genus contains about forty species, which are nearly all desirable.

Apocyniæ.

NERIUM.

A new and beautiful plant of this genus, under the name of *N. thrysiflorum*, is figured in the last mentioned work for May. The plant was raised from seeds received from Sylhet or Nepal, about six years since. The leaves are longer and more lanceolate than *N. splendens*, which it somewhat resembles, and the flowers are produced in a thick terminal cluster. The specimens were taken from the nursery of Mr. Tate, of Chelsea, who raised it from seeds, and where it flowered for the first time last season. It requires the same culture as the other species, and is a splendid acquisition to a collection of plants.

Polemoniæ.

COLLOMIA

Cavanillesii Hook and Arn. Cavanilles's *Collomia*.

Synonymes: *Phlox linearis* Cav. *C. coccinea* Lehm. *C. lateriata* D. Don.

A pretty annual, which we have now in bloom: the flowers are not very conspicuous, but a patch of plants has a pretty effect. Seeds sown in the fall or early in the spring will produce plants which will flower in June, and seeds sown in June will produce plants to flower again in September. We notice it now as it has been known, under the above names, and as such been introduced and grown in our gardens.

Scrophulariæ.

Mimulus guttatus Dec. and varieties. This charming species of an elegant and now extensively cultivated plant, with a conspecific, *luteus*, constitute the probable originals of the numerous fine varieties which adorn our green-houses and conservatories.

Much confusion exists respecting the progressive origin of the numerous varieties; and I know of no more essential service to the cause of floricultural botany, and benefit to your numerous readers, who are desirous of becoming acquainted with the history and description of these subjects of their care, than could be rendered by an article from your pen, Messrs. Editors, by which such a want should be supplied. I could therefore wish that a botanical description of the two above-named species should be given, and then a similar description of all the now known varieties. Mr. Breck, of the Lancaster Botanic Gardens, mentions, that from seed imported from England, he raised "the different vari-

eties." And, from the seed of that gorgeous variety, *M. Smithii*, I have plants bearing the appearance, not only of distinct varieties, but, I presume, of distinct species. The result of my experiment on these seedlings shall be forwarded for your use.

Mimulus guttatus (?) *Dec.*, now in flower with me, I consider a splendid flower. On six flowering stems, I have at this moment fifty or more expanded flowers, of the brightest orange-yellow, faintly dotted within. Each flower is larger than the variety *M. Smithii*, so much admired, and, in my humble opinion, with all due deference to that of the floral world, quite equal, if not superior. A peculiarity of a longer persistence of flowers than in *Smithii* I have noticed—several flowers continuing bright and firm for an entire week. This individual was a stolone from an old plant last autumn, preserved from the frost until the beginning of April, when it was removed into a warm room, and abundantly supplied with water. In May, the weaker shoots were all cut out, then repotted into a very finely comminuted natural compost, of vegetable mould and sand, and again copiously watered. This composition, precisely that used with such success in the cultivation of heaths (*Ericaceæ*), seemed to impart a new energy to the plant, and its delicately fibrous roots completely permeated the soil. On June 12th it expanded its first flower, and now (June 21) it presents an exuberance of growth rarely seen, with a foliage of the deepest green, and inflorescence brilliant and splendid. It may be added, that the above treatment was in-door cultivation, which secured it a more strict attention, which has been amply repaid. For parlor flowers, I do not know of any so desirable, possessing their peculiar economy; while grown in ornamented, glazed or porcelain pots, furnished with deep pans, and supplied with a profusion of water, these fine mimuli might supersede that almost antiquated and far less easily cultivated plant, the aquatic *Calla æthiópica*.—(*Com. by J. L. R.*)

Orchidaceæ.

ANGRÆCUM

caudatum *Lindl.* Long-tailed Angraecum. A stove epiphyte; with greenish-white flowers; appearing in August; a native of Sierra Leone. *Bot. Reg.*, 1844.

A most singular and beautiful species, which flowered in the collection of the Messrs. Loddiges, at Hackney, where it is grown on a piece of wood suspended from the roof of the stove. It is increased with great difficulty, and is not likely to become common at present. One of the most remarkable structures occurs in this species, which is, the unusual length of the spur, measuring *nine* inches. It is impossible to imagine for what wise purpose this singular appendage was intended, unless, as Dr. Lindley remarks, "to exhibit the endless diversity of power of the Creator." (*Bot. Reg.*, April.)

MAXILLARIA

rufescens Lindl. Brownish Maxillaria. A pretty stove epiphyte; with red and yellow flowers; appearing in December; a native of Trinidad. Bot. Reg., 1848.

"By no means one of the prettiest of the genus," although it is a beautiful object when closely examined. It first flowered in the Duke of Devonshire's collection, in 1834. The flowers are small, with a yellow labellum, spotted with crimson. (*Bot. Reg.*, April.)

ART. VII. *Calls at Gardens and Nurseries.*

WE have visited several gardens, but, for want of room, must defer the principal part of our remarks until our next, at which time we shall endeavor to notice several at length. The following hastily penned notices are all we have room for.

Belmont Place, Watertown, J. P. Cushing, Esq.—June 23d. We passed a few minutes at this place, but had only time to walk hastily through the houses; these are in fine order—neatness and cleanliness prevalent throughout. In one of the stoves, the pines, which have lately been potted and plunged in a new bed of leaves, look strong and vigorous. The other is filled with grapes, in pots, which are covered with a fine crop of fruit; on some we counted from twenty to thirty clusters. Ripe fruit has been cut from some that were introduced very early. We here had an opportunity to notice the difference in the vigor of vines, when raised from eyes or from coilings. The former bore by far the largest crops; the latter, which were put in last season, in order to try Mr. Mearns's system, not having made wood of much more than half the size of the former, and the clusters of the fruit are not near as handsome. *Combrètum purpureum* was magnificently showy, having a dense raceme of scarlet flowers expanded, upwards of two feet in length. *Anaryllis vittata* and *Vallota purpurea* were also brilliant with their exquisitely beautiful blossoms. *Cactus Jenkensoni* had opened several flowers, and was about expanding another; it is a very free-blooming species.—*Conds.*

Amateur Garden of S. Walker, Roxbury.—June 15th. We were much delighted to see, in the very fine collection of S. Walker, that rare and alpine plant "*Gentiana acanthis*," which, though rather past its best state, was still exceedingly interesting; so seldom, if ever, has it flowered with us. Impatient of heat and drought as it is, much credit is due to its cultivator for his success in overcoming the unpropitious circumstances of the season, and rendering it so healthy. Mr. Walker's seedling pansies are deserving of attention.—*R.*

REVIEWS.

ART. I. *The Gardener's Magazine and Register of Rural and Domestic Improvement.* Conducted by J. C. Loudon, F. L. S., H. S., &c. In Monthly 8vo Numbers; 1s. 6d. each. No. LXXIII, for April.

ART. 1, "Some account of the Gardens and state of Gardening in Yorkshire." The author of this paper makes the following excellent remarks, in relation to the importance of gardeners frequently visiting gardens in the neighborhood in which they reside, in order to acquire information: they are no less applicable to every amateur, especially those who sometimes imagine they excel in some peculiar department:—

"Few gardens are so poor that they will not repay the trouble of a visit, by supplying some useful hint, or improved practice, to an acute observer; or making him acquainted with a new or superior variety of fruit, flower, or vegetable; or bringing under his notice one or other of the remarkable variations so often produced on plants by the difference of soil and situation; or, what is, perhaps, of equal importance to a gardener of the present day, by exhibiting something either advisable to follow, or necessary to avoid, in the higher department of his art, landscape-gardening.

"The gardener who is confined within his own walls, whether by the illiberality of his employer or his own apathy, generally overrates his own horticultural skill; and, instead of 'growing wiser as he grows older,' becomes bigotted in his erroneous notions, and prejudiced against any deviation from the beaten track which he has so long followed. It is to freedom of intercourse that we are chiefly indebted for the vast extension of knowledge in the last century; compared with which, its most rapid progress in former ages appears only a snail's pace. In gardening, especially, the modern improvements must, in a great measure, be attributed to this cause, acting through the media of horticultural societies and books. But, in the practical part of the art, seeing, and reflecting upon what we see, are better than reading, and reflecting upon what we read; therefore, so far as it can be done without neglect of duty, a gardener ought to visit, with a view of acquiring knowledge, all the gardens accessible to him. I do not wish, however, to undervalue the advantages of reading; without it, a gardener must necessarily remain far in the rear of the spirit of the age; and, in the choice of subjects, it is my opinion, that descriptions of, and critical remarks upon, places, such as those occasionally given in this Magazine, are quite as instructive to a learner, as a detailed method of cultivating a particular kind of flower or vegetable."

The following description of a peach house is given, which, it is stated, so far as economy of space is concerned, is very superior:—

"Length, thirty-two feet; width, sixteen feet; height at the back, twelve feet; height at the front, four feet six inches. The upright

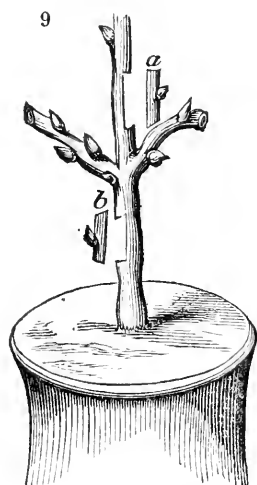
front sashes are hung by hinges to the upper wall-plate, and open outwards at the bottom, for the purpose of admitting air. Every alternate upper light is likewise movable in the usual way. The flue enters the house at one end, beneath the back walk, and passes along the front and the other end, one foot from the glass, returning along the house, three feet six inches from the back wall, to the place where it entered; it then dips again under the walk, and enters the back wall. The flue thus encloses a pit twenty-seven feet long, and eight feet six inches wide, in which the trees are planted. Between the back flue and the back wall there is another border, in which standard trees are planted: these are trained to a trellis against the back wall. The trellis to which the other trees are trained is nearly horizontal; and it extends over the whole of the house, except three feet of the back border (which, being covered by a framing of boards, serves for a walk), and that part of the flue which passes along the front of the house. This trellis is three feet six inches high at the back, and it declines to two feet six inches in front."

The second article, on "the importance of Gardeners studying the Natural System of Botany," though useful, contains nothing sufficiently important to extract.

The third article is the detail of a "new method of grafting, or rather budding Vines," accompanied with an engraving. We have had a copy taken of this, and present the article entire, as we believe it is the most sure and easy mode of grafting or budding vines that has ever come under our notice. The old system of boring holes in the stems of strong vines, and also many other methods in use, are very uncertain, and often, if well done, disappoint the operator, when his expectations are formed of a successful growth. The method detailed in this extract will, however, remedy all the defects of the more common systems:—

"I beg to submit to your readers a method of grafting, or rather of budding, vines, which I was led to adopt merely from my own ideas of vegetable physiology, and which, I feel confident, will always be attended with success. I am not aware that the method is at all known; at least, I have never heard of it, and to me, at least, it is quite original. The well-known method of detached grafting I had tried repeatedly, but without success; and, in endeavoring to trace the cause of this failure, I remembered having seen two new vine-houses, which, under the management of several most distinguished gardeners, had for a series of years been partially accelerated, for the important purpose of furnishing abundance of bearing wood; and such was the failure in both these instances, that, as a last resource, the vines in one of the houses were cut down to the parapet every second year. In this place, the gardener was changed five times in as many years; but, when the fifth made his *entrée*, he was accompanied by a most auspicious companion, *success*. In the other place, the gardeners were not more successful: the buds broke so irregularly, that only two, or at most three, eyes at the top of the vines appeared with sufficient strength to render their retention tolerable; while the rest of the shoots downwards were as bare as a barber's pole. In both the instances alluded to, I readily perceived that there was a great want of humidity in the atmosphere, and, also, that there was a very rich deep border. Although, in my endeavors to graft with detached scions, I had taken care to keep up a very damp atmosphere, still my attempts proved abortive: to a gar-

dener who knows that a single bud, when immersed an inch in any tolerable soil, will not fail, under ordinary care, to become a plant; or, that a cutting of young wood, when in full leaf, put in a heap of fermenting tan, and shaded, will also root freely; the failure of detached scions, even when grafted in a masterly manner, will certainly appear paradoxical. Knowing that the same kind of sap which, when put in motion, causes the emission of roots in the cutting, produces also the union between the stock and scion in grafting, I was led to put the question to myself, whether a single bud, inserted in the stock, and enveloped with any light mould that may keep moderately moist, would not effect the desired union? To enable myself to give a decisive answer to this question, I took a small black Hamburgh vine, which had grown for a year or two in a pot, the stem of which did not exceed four tenths



of an inch in diameter, from which I excised two pieces of the extent of half their diameters (see fig. 9). I then took two shoots from vines growing out of doors, from which I selected the buds (*a* and *b*); first cutting quite across the shoots, and afterwards slipping them longitudinally, reserving nearly all the pith to the part containing the bud; except the two extremities, which I cut away till the bark of the stock and scion came nicely in contact. I then bandaged them tightly together in the usual manner, only leaving the buds uncovered by the ligature. I next fitted a small flower-pot (size number sixty) round the grafts, which I filled with the mould of an old cucumber bed: this was done about the beginning of November, and about a month afterwards the vine was plunged in a mild heat. The buds of the vine soon broke; and, in about three weeks afterwards, the buds from the scions were seen emerging from the mould in the pots. The bud *a* is now about four inches above

the mould; and the other, as might be expected, about half that distance. I may mention that I have suffered strong shoots to issue from the stock above the scions; so that, if the scions had been suffered to draw the nourishment furnished by the stock, they would probably have extended upwards of one foot in length. Should you think the above hints worth your notice, I have no doubt they may prove acceptable to some of your readers; and, if so, they are voluntarily, though hastily, tendered."

From Art. 4, "on the uses of Slate for Horticultural purposes," we perceive that it is highly recommended for making tubs for orangeries, conservatories, and for the decorations of lawns and walks. Several beautiful patterns have been exhibited in the garden of the London Horticultural Society, and they have been highly approved of by Mr. Aiton and Mr. Munro. It is also recommended for various purposes. W. Harrison, Esq., of Cheshunt, has fitted up his conservatory with it; the shelves and stages are all of slate, and are stated to have a neat appearance.

An elegant engraving is annexed, representing two large orange-tubs, with plants, formed of slate. They are made with four sides, which take apart, and the plants are thus easily re-potted. At some future time we hope to call the attention of our readers more particularly to its uses, and, perhaps, copy one of these designs. Slate can be had in great quantities here, at a cheap rate ; it can be easily manufactured, and we hope it will come into general use. From its imperishable nature, it will certainly be much cheaper in the end, as well as handsomer, for forming tubs for all kinds of large plants.

The fifth article is a design for laying out a villa residence, of four acres ; of no use without the accompanying plan.

Art. 6 is also a design, for laying out a flower-garden, with remarks by the conductor. This is an improved design on one which the conductor offered as an exercise for young gardeners, to practise their skill upon ; it seems, however, that "a country-bred gardener" has made no improvements, as the conductor makes the following remarks :—

"To point them [the faults] out in detail would be to repeat much of what we have said on former occasions : suffice it to say, that there is a total want of connexion in the position of the beds relatively to one another, and to the walks ; a total want of expression and character, because the beds are in no degree grouped ; and a want of harmony in the forms of the beds, because some of them are of the most artificial, or, in other words, geometrical, shapes, and others of shapes which may be called natural or accidental : the whole shows a want of artist-like feeling, and of knowledge of composition."

The seventh article is a design for laying out a piece of ground in front of a villa-residence.

Art. 8 contains a method of making elastic walks for gardens. We do not think such will become very common here ; but we make the following extract, more that our readers may see how fertile the inventions of our transatlantic friends are, than for its real use.

"Among the various methods of making walks pointed out in your *Encyclopædia of Gardening*, I can find none that accord exactly with those that I would recommend in this paper ; namely, *elastic walks*. Their object is to add pleasure to the flower-garden ; for in many gardens the walks are of such a nature, that one would almost think they were intended to make the persons walking on them do penance in the temple of Flora, instead of affording ease and pleasure while contemplating the cultivated beauties of the vegetable kingdom ; but, I believe, if the plan be adopted which I shall presently recommend, the fairest flowers of creation will linger with delight among the ambrosial sweets of the flower-garden, and walk with as much softness and comfort as if on a Brussels carpet.

"The method I would recommend to make elastic walks is this :—Remove the earth one foot deep ; and, if found necessary to have a drain, make it in the centre or side of the walk. After the drain is finished, fill the bottom of the walk with small stones to the depth of

three or four inches ; then fill up the remaining eight inches with flow-peat, or decomposed moss (*Sphágnum*). This kind of peat is light and spongy, it resists putrefaction, and remains longer unimpaired in its form, than any other kind of peat. After it is put into the cradle of the walk, it must be levelled with the spade, and trodden upon with the feet, so that no inequalities may appear on the surface ; afterwards the roller should be brought over it. After this treatment it will become more compact, and will have sunk a little : this will allow room for two or three inches of fine engine ashes to be laid above it. The ashes that have undergone two burnings are the best for color, having a close resemblance to gravel. After distributing the ashes equally over the surface of the peat, with a rake, they must be rolled over and over, until they form a kind of cake above the peat, and then the walk is finished. It may be thought that walks of this nature will be damp, but I have always found them as dry as those that are made with stones and gravel ; and they are strong enough for all the ordinary wheeling that is required in the flower-garden. I have no doubt that the valetudinarian would derive great comfort from such walks ; and if they tend to make the flower-garden a greater source of pleasure, I shall have gained my object."

ART. II. *An Essay on Calcareous Manures.* Second edition, greatly enlarged. By Edmund Ruffin. 1 volume, 8vo. 116 pages. Shelbanks, Va. 1835.

THIS valuable work, which has long laid upon our table, but which we have been prevented from noticing, from the press of other matter, more immediately within the limits of the subjects interesting to our readers, is, nevertheless, too valuable to be passed over. Indeed, we almost owe an apology to its excellent author, Mr. Ruffin, who sent us a copy as soon as published, for so long having delayed this.

The opinions contained in this essay were first published in the *American Farmer* (issued in Baltimore), in 1821. Subsequent experiments were made with the intention of publishing the same in the *Farmer's Register*, of which Mr. Ruffin is editor ; but the quantity of matter having greatly accumulated, it was published in a volume, in 1832. This edition has lately been issued, much enlarged, and the facts it contains are of great importance to the agricultural community of our country, more especially those who reside in such districts as those to which Mr. Ruffin has more particularly confined his remarks.

The properties of soils and the operation of manures are too little known by our farmers. Indeed, it is our greatest wish

that agriculture was more scientifically practised ; that experimental knowledge should not be relied on alone ; but that a partial knowledge of chemistry, and other immediately connected sciences, should be depended upon, rather than opinions which have no other foundation than the changing ideas of successive cultivators. The essay is wholly directed to those lands, now barren, but which the application of calcareous manure will render fertile and profitable. The immense beds of fossil shells, throughout the tide-water region of the Atlantic, afford great facilities for the manuring of such lands, and furnish, at once, a cheap and excellent substance. Agriculturists residing in such situations will be the most benefited by this work ; but the general principles which it contains are applicable, in a greater or less degree, to every part of the country.

The work is divided into three parts, viz :—Theory—Practice—and the Appendix. The two former are divided into twenty chapters ; and the latter into notes applying to the two former. After a few descriptive and explanatory chapters, the author proceeds to discuss the following propositions :—

“ Proposition 1. Soils naturally poor, and rich soils reduced to poverty by cultivation, are essentially different in their powers of retaining putrescent manures : and, under like circumstances, the fitness of any soil to be enriched by these manures, is in proportion to what was its natural fertility.

“ 2. The natural sterility of the soils of Lower Virginia is caused by such soils being destitute of calcareous earth, and their being injured by the presence and effects of vegetable acid.

“ 3. The fertilizing effects of calcareous earth are chiefly produced by its power of neutralizing acids, and of combining putrescent manures with soils, between which there would otherwise be but little if any chemical attraction.

“ 4. Poor and acid soils cannot be improved durably or profitably by putrescent manures, without previously making them calcareous, and thereby correcting the defect in their contribution.

“ 5. Calcareous manures will give to our worst soils a power of retaining putrescent manures, equal to that of the best—and will cause more productiveness, and yield more profit, than any other improvement practicable in Lower Virginia.”

The author argues his subject with much originality, and the results of his experiments are very satisfactory. We have scarcely room to make any extracts, but we give the following as the result of one :—

“ 1822. On a body of neutral soil which had been reduced quite low, but was well manured in 1819, when last cultivated, gypseous marl was spread on nine acres, at the rate of three hundred bushels. This terminated on one side at a strip of muscle-shell marl, ten yards wide—its rate not remembered, but it was certainly thicker in proportion to the calcareous earth contained, than the other, which I always avoided laying on heavily, for fear of causing injury by too much gypsum. The line of division between the two marls, was through a clay loam. The

subsoil was a retentive clay, which caused the rain water to keep the land very wet through the winter, and early part of spring.

"*Results.* 1822. In corn, followed by wheat in 1823: not particularly noticed—but the benefits must have been very inconsiderable. All the muscle-shell marling, and four acres of the gypseus, sowed in red clover, which stood well, but was severely checked, and much of it killed, by a drought in June, when the sheltering wheat was reaped. During the next winter (by neglect) my horses had frequent access to this piece, and by their trampling in its wet state, must have injured both land and clover. From these disasters the clover recovered surprisingly; and in 1824, two mowings were obtained, which, though not heavy, were better than from any of my previous attempts to raise this grass. In 1825, the growth was still better, and yielded more to the scythe. This was the first time that I had seen clover worth mowing on the third year after sowing—and had never heard of its being comparable to the second year's growth any where in the lower country. The growth on the muscle-shell marling was very inferior to the other, and was not mowed at all the last year, being thin and low, and almost eaten out by wire grass.

"1826. In corn—and it was remarkable that the difference shown the last year was reversed, the muscle-shell marling now having much the best crop.

"In these and other applications to neutral soils, I ascribe the earliest effects entirely to gypsum, as well as the peculiar benefit shown to clover, throughout. The later effects on grain are due to the calcareous earth in the manure."

Did our magazine treat upon agriculture, it would give us much pleasure to notice this work at greater length. We gladly commend the volume to every farmer; and, as it is published at a very low price, we hope it will find its way into the hand of every agriculturist.

MISCELLANEOUS INTELLIGENCE.

ART. I. *General Notices.*

The Use and Abuse of Hybridisation.—In the *Botanical Register* for February, 1835, Dr. Lindley has, in an article appended to his description of *Calceolària longiflòra*, cast a very unjustifiable reflection upon gardeners, which is no less than that, in their "haste and unskilfulness," they have converted the fairest races of the vegetable world into unhealthy, mongrel, and debased varieties; and that calceolarias are already sinking in estimation, in consequence of the ruin they have brought on them by hybridisation. We were previously aware that calceolarias do not hold the same place now as formerly in the estimation of some, with whom pounds, shillings and pence weigh heavier in

the balance than either beauty or deformity. But the calceolaria is not altogether the point at issue ; Dr. Lindley only makes use of it as the peg on which to hang his charge against us, of converting the "fairest races" into mongrel and debased forms. To this charge we should at once plead guilty, promising in future to adhere more strictly to "wild and genuine" forms, and to "abandon a pursuit which has as yet led to few results which good taste can approve ;" but we have the evidence of our senses, and that of the horticultural world, coupled with Dr. Lindley's previous opinions, to bring against this charge. We may at once advert to a few instances, *ex pluribus*, of Dr. Lindley's previous opinions on cross-breeding and its results. Who said, "The power which man has over nature holds out to us prospects of the most gratifying kind, in regard to the future gayness of our gardens ?" Who asserted that "improvements of the most remarkable kind are yearly occurring in consequence of hybridisation ?" and that "hybrid productions are undoubted cases of improvements resulting from skill ?" Who said, "The industry and skill of modern gardeners have been creating intermixtures which greatly add to the beauty of the flower-garden ?" And who even went as far as to say, "The constant dropping of water will not more surely wear away the hardest stone, than will the reason of man in time compel all nature to become subservient to his wants and wishes ?" Who, indeed, but Dr. Lindley ? And yet he now turns round, at the eleventh hour, and proclaims to all the world that gardeners, through their ignorance, have brought ruin on the "fairest races of the vegetable world." The doctor ought at least to have been impartial in this charge. It is well known that gardeners are not alone guilty of these acts. The late Earl of Carnarvon converted some of the "fairest races" into mongrel and debased varieties : witness *Rhododéndron alta-clerénse*, and *Azàlea thrysiflòra*, &c. The present Earl of Mount Norris brought ruin on the *Pæonia Moutan*. Mr. Knight, Dr. Van Mons, and others, have done more injury among our best fruits than gardeners ; to say nothing of that king of hybridisers, the Rev. and Hon. William Herbert, who has, perhaps, brought more ruin on the "fairest races," than all the gardeners put together. Dr. Lindley says, if we must have hybridising, let us have it by those rules by which alone it is possible to arrive at a really desirable result : but Dr. Lindley knows, or ought to know, that the power which prescribed the exact limits to which certain genera can change their natures, has given unbounded limits to others, which set at defiance the best rules of the most consummate philosophy, and, in their progressive stations to a "desirable result," thousands must necessarily be discarded. Here lies the whole secret. If we trace the history of our best fruits and vegetables (to say nothing of the tulip, the dahlia, &c.), we shall find the same effects following the same causes, ever since the discovery of the sexual system in plants. With these facts staring us in the face, are we to give up a practice by which we are sure of ultimate success, because certain "races" are falling into disrepute with those who cannot take a comprehensive view of the subject ? Certainly not. Dr. Lindley, with the candor of the true man of science, renounced some of his former opinions, on conviction of their untenableness ; and, that he may reconsider his opinions respecting cross-breeding in the vegetable world, these facts are, with the utmost respect, submitted to his notice.—(*D. B. in Gard. Mag.*)

Lobèlia splendens and fulgens, two beautiful varieties, apparently belonging to one species, were introduced to Europe by rather a singular circumstance. Specimens of these plants were gathered in flower in Mexico, by the celebrated botanists Humboldt and Bonpland, and put into their herbariums in the usual manner. When these botanists

arrived in France, they found ripe seeds on their dried specimens ; and these seeds being given to M. Thouin of the Jardin des Plantes, were the origin of all these showy lobelias now common in British and Continental gardens. This is stated on the authority of Dr. Lippold, an eminent German botanist and horticulturist, now in London, and the author of the *Volständig Gartner*, 2 vols. 8vo, &c.—(*Ib.*)

Cultivation of the Bamboo in France.—A piece of bamboo, about twelve inches in height, was planted, on the 1st of April, 1833, in a garden at Hières, in the department of Var. It has already produced several shoots, from twenty to twenty-six feet long. The ground in which it was set was constantly irrigated during the summer. One of the shoots, which only came out of the ground on the 3d of last September, had obtained twenty-five feet of elevation on the 29th of October. Its circumference at the base was nine inches, and, at the height of a man, about seven inches and a half.—*Athenæum*, Sept. 19, 1835.—(*Ib.*)

Vitality of Seeds.—Several tombs were discovered last year at Monzie, St. Martin Dordogne, the most remarkable circumstance attending which is, that the head of the skeletons were placed on a heap of seeds, contained in a cavity left in the cement, large enough to contain the occiput. These seeds have been sown, and from them have been raised the *Heliotropium europæum*, *Medicago lupulina*, and *Centaurea Cyanus*. This circumstance confirms the opinion lately advanced by several physiologists, that certain vegetables preserve their germinating power for an indefinite period, if kept out of the reach of the agents necessary to germination. Some of these vegetables are birch, aspen, groundsel, rushes, broom, digitalis, heaths, &c.—*Athenæum*, July 25, 1835, p. 572.—(*Ib.*)

ART. II. Foreign Notices.

ENGLAND.

Turnip Fly.—At the ordinary meeting of the Entomological Society, held on Monday evening, a communication from Mr. Raddon, respecting the natural history and habits of the turnip fly, was read by the secretary, which was accompanied by specimens of the larvæ and pupæ. The larva is a small black caterpillar, having six legs of about the eighth of an inch in length, being extremely active, and hopping about with great agility, so as to render it extremely difficult to catch it. Towards the end of the summer it enters the earth, and there undergoes its change of form, coming out of the pupa a beetle. [It is creditable to the Society, that they have made this subject the theme of a prize essay, and have been the means of bringing before the public even so much as is stated above on the turnip beetle ; for the pamphlet of the Doncaster Agricultural Association on this insect, and the means of preventing its ravages, published in 1834, is a comprehensive proof that the attempts at preventing its ravages have been more numerous than the attempts to ascertain intimately its personal history ; which last object is the one that would have most conduced to the discovery of what was to be prevented ; and, hence, to the employment of the most effectual means of effecting this object.] The best essay on the habits of the insect, and the readiest and cheapest mode of preventing its rava-

ges, is the subject of a prize to be given by the Society in the course of the present session.—*Newspaper*, Jan. 6, 1836.—(*Gard. Mag.*)

Strelitzia augusta H. K.—A magnificent specimen of this plant is now in fine flower in the stove of Joseph Wilson, Esq., Clapham Common, under the care of my very esteemed friend, Mr. Joseph Gunner, who is gardener there.—(*W. P. Jr. Gard. Mag.*)

A large plant of *Brugmansia suaveolens*, grown in the garden of Richard Durant, Esq., Putney Hill, and now in flower there, was propagated from a cutting in August, 1833. It is in a pot twelve inches deep, by thirteen inches over; its height is five feet; and it has a single stem two feet high, with a spreading top, the circumference of which is nineteen feet. It shows at the present time one hundred and two flowers and flower-buds, eighty of which are expanded. Each of its pure white trumpet-like flowers measures fifty-three square inches; so that it will, in about four weeks from its first beginning to flower, produce eight thousand five hundred and eighty-six square inches of flower, and all from less than one solid foot of mould. We have another *Brugmansia*, that was exhibited at Chiswick last year, three years old, which had upon it, thirteen weeks before the exhibition, two hundred and twenty-eight flowers and flower-buds. Another, now in flower, one year old, growing in a pot, size sixteen, has forty flowers upon it.—(*J. Spence, ib.*)

BELGIUM.

Ghent, Oct. 19, 1835.—I enclose an engraving of a new building for the Ghent Horticultural Society: it is intended partly as a casino, or concert-room, and as an exhibition for plants, either of which names it has as much right to as the one it bears: in fact it is a compound of all three. Hereafter a garden is intended to be laid out. The building and ground have cost a great sum of money, and there appears to be much room lost. The building appears heavy, and out of proportion to its breadth; but, till finished, it is unfair to give an opinion. I certainly do not approve of the compound association, and should have preferred seeing a smaller building, *built expressly* and solely for our Society; and, also, that part of the money expended on the present structure should have been set aside for the purpose of giving encouragement to gardeners and to horticulture, by increasing the number, value, and utility of the prizes; which, at present, consist solely of medals; whereas books and small pieces of plate ought to be substituted; and any surplus funds might be employed to enable the Society to send out to South America an able collector of plants. In the mean time, the present building will do no harm; and, though it might have been arranged much better for the purposes of horticulture than it is at present, it is very likely to increase the number of members, and may, in a few years, be the means of benefiting the Society. At present our Society requires many reforms; and, until such reforms take place, the rules of the Society cannot be called beneficial to horticulture. But, from the present state of society, and from the opinions of some of our most influential members, I am led to believe that the period of reform is not distant. I hope, also, to see a botanical work established by the Society; for, until the gardeners in this country become perusers of such works, there will never be one who is capable of taking care of, or superintending, a valuable collection of plants, in the way they ought to be cultivated. I send you the first number of a new work, called the *Le Cultivateur*, &c., though it relates more to agriculture than to horticulture.—(*W. T. C. Gard. Mag.*)

ART. III. Domestic Notices.

Gama grass (*Tripsacum dactyloides*).—We observe that this grass, which, *en passant*, has really been *fodder* for a long time for the editors of our numerous agricultural and horticultural periodicals, has at last reached England, where Loudon, in the last number of his Magazine, recommends it for a trial. He, however, is quite pardonable for so doing, as he has doubtless drawn his information regarding it from the American accounts. Nothing can be more nonsensical than the praises lavished upon this grass, in our papers for the last two or three years, as a crop for culture in the northern states, as all intelligent cultivators who have tested it themselves are now fully aware. The *gama grass*, in the southern states, under a burning sun, and in situations where the common pasture grasses of the cooler states would perish in a month, yields abundant crops of coarse herbage, and is really a plant of the greatest utility; but to endeavor to cultivate it in the northern states, where the finest and most nourishing grasses are indigenous or perfectly naturalized, is something like exchanging for dry corn-stalks the first verdant growth of red clover. It will be still more amusing and ridiculous in England, where the moist climate and mild summers contribute to the production of the closest and finest turf, and most tender and succulent herbage for cattle, to be found in the world.—*A. J. D., Botanic Garden and Nursery, Newburgh, N. Y. June, 1836.*

The Crape Myrtle nearly hardy.—We have little doubt that this well-known and very beautiful shrub from the East Indies, formerly treated as a tender hot-house, and still as a green-house plant, will yet become *naturalized* in the northern states. Our attention was attracted to the hardness of this shrub, by seeing one of three or four feet high in a neighboring garden, which braved the winter of 1834, without losing but half its height. A plant of several years growth, which had been planted in the open ground during summer, was, last season, in the expectation of a mild winter, left exposed without any shelter, at this establishment: of course, owing to the severity of the cold (unparalleled in *duration* and *severity* for fifty years), it was killed to the ground; but we are now gratified with the sight of an abundance of thrifty shoots, which have sprung up from the roots, and are growing with the greatest vigor. It can scarcely be questioned that, if planted in a warm *dry* soil, in a sheltered situation, and protected with a covering of straw or mats for a few winters, this fine shrub would be enabled perfectly to endure our ordinary winters, and produce annually, during summer, its luxuriant clusters of delicate pink blossoms.—*Ib.*

Some species of the Sedges (Cyperaceae) might, with considerable advantage, be introduced into our shady borders, especially in those gardens surrounded by belts of deciduous trees, or by hedges. *Carex folliculata*, *lupulina*, *hystericina*, are conspicuous for their turgid and nodding fruit spikes, and are uniquely elegant in their growth. Huge patches of *Phalaris arundinacea* var. *variegata*, may be seen thriving with a luxuriance which threatens to destroy more valuable and delicate plants; while, with the exception of the pearl-strung *Briza maxima*, other and more interesting gramineous plants are generally excluded. One of the very first vernal precursors of Flora, in this vicinity, is the pretty *Carex marginata*, so common on every dry, sunny and rocky hill-side, of golden-yellow hue from its bright and pendent anthers, and would fain content itself with some secluded and retired, quiet nook of the garden, where, undisturbed and unvisited during the more prominent reign of its gaudy sister vegetables, it should

awaken a suitable attention in returning spring, when the minutest flower is welcomed as a friend.—*R.*

Phytolacca decandra.—In your Magazine for this month, you make an extract from Loudon respecting the *Phytolacca decandra*, and inquire of your readers whether they have ever known it to be used as spinach or asparagus. I have frequently seen it on the table dressed like spinach; and, in the absence of most other vegetables that might serve for that purpose at the time it springs up, it is by no means disagreeable. It was formerly gathered oftener than at present. Dr. Bigelow is correct in saying the root is a powerful emetic. It was formerly an important article in the *materia medica* of the negroes, who prepared it by steeping a few hours in spirit. I have been told by those who have taken it, that it operates with great violence; but this is rather a recommendation to the ignorant than otherwise. I do not conceive, however, that its emetic properties alone would prevent the sprouts from being safely used as an esculent: a portion of some plants is said to be medicinal, while another part is poisonous, and still another part edible. The mandrake has been instanced as an example.—*Yours, P., June, 1836.*

Cultivation of the Tea Plant.—We have lately noticed a paragraph, going the rounds of the papers, stating that Mr. John Platt, of Marietta, Ohio, has succeeded in cultivating the *genuine (?) tea plant of China*. He has for ten years past cultivated it successfully, and confidently believes that, from the experiments he has made, to which he has been at considerable expense, he has discovered the art of drying and manufacturing the leaves, so as to produce tea equal in quality to the imported *young hyson* of commerce. He also has, in his possession, samples of his own manufacture, which he will exhibit to any persons desirous to ascertain the fact. Mr. Platt offers to give, gratis, to any gentleman wishing to try the experiment, fresh seed of last year's crop, with instructions in regard to the manner of planting and rearing it. He is satisfied that it can be raised and cured in this country with good profit. This is the first instance in which we have heard of the tea plant ever having been grown, otherwise than in a green-house, in this country. It is, in our climate, a tender shrub, requiring protection from frost, and making quite a slow growth. Did this information not come to us in such a questionless shape, we should be inclined to believe that the tea shrub, so called by Mr. Platt, was not the *Thèa Bohèa* of botanists, and the true tea plant of China. We should be extremely glad to know, and any of our correspondents in the neighborhood of Mr. Platt will greatly oblige us, if they can give us any information in regard to this plant. The climate of Ohio is nearly the same as our own, and it will be a matter of astonishment to us, if it stands the winter unprotected. What course Mr. Platt has taken to raise the plants successfully, and to procure seed, we are not aware of. We have long believed that the climate of Florida, and, perhaps, other southern states, would be favorable for the production of tea; but the expense which would be likely to attend its manufacture, so as to compete with the Chinese, would forever prevent it from being cultivated as an article of domestic produce. Perhaps a poor sort of tea might be made, by compression of the leaves in the same manner that the Shakers put up their medicinal herbs; but in any other manner, we doubt the propriety of trying the experiment.—*Conds.*

ART. IV. *Massachusetts Horticultural Society.*

Saturday, June 4th, 1836.—This was a quarterly meeting of the Society, for the transaction of business.

Read. A letter received by the Corresponding Secretary, from Commodore Porter, of the U. S. Navy.

The former Chairman of the Flower Committee having tendered his resignation, M. P. Wilder, Esq. was added, to fill the vacancy, and directions given to the Committee to choose their chairman. A committee was also appointed to invite some gentleman to deliver the annual address before the Society.

June 11th.—Exhibited. From J. A. Kenrick, *Pæonia officinalis*, *officinalis albicans*, *rubra*, *uniflora*, and *P. paradoxica*; several varieties of azaleas. From the Messrs. Winship, Harrison's yellow rose, numerous varieties of the Scotch rose, and pæonies.

From M. P. Wilder, Esq., *Alstrœmëria pelegrina psittacina*, *aurantiaca* and *tricolor* (*Flôs Martini*), *Márica cærulea*, *Gladiolus Colvillii*, *Plumbago capensis*, seedling *calceolarias*, and a variety called the Grand Sultan; *Pancrätium Amâncæs*, *Maurândya Barclayana*, *Petunia phœnicea*, *salpiglossides*, Tiger flowers, double white rockets, &c.; also, Triumph of Bollwiller, Lady Byron, and Belladonna roses.

From Hovey & Co., various kinds of flowers and seedling pansies. From S. Walker, fine seedling pansies.

From George Newhall, Early Virginia strawberries, and Russett pearmain apples.

June 18th.—Exhibited. From S. Sweetser, *Lophospërmum erubescens*, *Calâmpelis scâbra*, *Asclêpias curassávica*, *fuchsias*, &c., and geraniums of the following kinds:—*Regulator*, *Queen of Scots*, *Yeatmaniûnum*, and many others. From T. Lee, Esq., Brookline, *Eschscholtzia californica*, *Tagêtes lûcida*, *Lupinus polyphyllus*, pentstemons, *Rose Irene*, &c. From the Messrs. Winships, red and white Boursalt, Harrison's yellow, and new Florida roses.

From S. Walker, *Astrântea major*, *Achillëa giberáltica*, *Lychnis Flôs Jôvis*, *Papâver orientâlis*, *Dictâmnus âlbus*, African day lily, *statices*, double white rockets, *hyacinth* sp. from Pennsylvania, *irises*, &c.; also, superb new seedling pansies; one, which Mr. Walker has named *Othello*, is an elegant dark flower, measuring upwards of two inches across the two upper petals; the eye is a golden yellow, shaded off, through a rich orange, into the purple; many others were exceedingly fine; several specimens of Bow's *Claudius pink*; these were finely grown.

From Hovey & Co., *Pëntstemon ovâtum*, *Phlôx sauvêolens*, and *maculâta*, *Verónica latifolia*, *Calceolària pëndula*, *Campânula aggregâta*, *Sophôra austrâlis*, *Pæonia sibêrica*, *Rôsa calypso*, pansies, geraniums, *pyrethrums*, &c.

From E. Vose, Esq., Early Virginia and Royal scarlet strawberries. From J. L. L. F. Warren, Brighton, Keen's seedling strawberries. From T. Hastings, Keen's seedling strawberries. From Hovey & Co., Royal scarlet strawberries.

Presented. A beautiful painting of fruits and flowers, from John J. Low, Esq.

Distributed. Various kinds of melon seeds, received from the Rev. J. Pierpont, and sent by him from Constantinople.

June 25th.—Exhibited. From Hovey & Co., *Pæonia Whittlejii*, *Papâver orientâlis*, *Pëntstemon ovâtum*, *Phlôx glomerâta*, *bimaculâta*, *maculâta* and *disticha*, *Gaillâirdia aristâta*, *Spiræa bella*, *Campânula aggregâta*, &c.; Rivers's George the IV, new crimson Boursalt, and

Gen. Thier's rose. The two former were now exhibited for the first time ; also, geraniums, roses, &c. From S. Walker, *Gladiolus flavus*, *Pæonia Whittlejii*, *Delphinium sinensis* flore pleno, *Spiræa filipendula*, double white rockets, irises, feathered hyacinths, roses, &c. &c. ; also, fine seedling pansies, among which were village maid, maculatum, and Othello ; Robinson's Navarina, and Bow's Claudius pinks.

From T. Hastings, Keen's seedling strawberries. From E. Vose, Esq., Keen's seedling and Methven scarlet strawberries. From Joseph Warren, Brighton, Methven scarlet strawberries. From Hovey & Co., seedling strawberries of large size (these were considered by the committee very fine) ; they are a cross between the Keen's seedling and Methven scarlet, and possess all the hardness of the latter, with the flavor and size of the former.

ART. V. Exhibitions of Horticultural and Floricultural Societies.

We have repeatedly called upon the secretaries of the various horticultural and floricultural societies throughout the country, to send us notices of the exhibitions of their respective societies : it is our aim to record every thing connected with the progress of gardening, and, among these subjects, the most important are these exhibitions. We sometimes see reports in the newspapers, but frequently the names of the plants are so badly spelt, that it is almost impossible to find out what were the true kinds shown. We do not wish for these reports for any other reason than their importance, as showing the progress of a taste for horticulture and floriculture ; for the correction of the proof sheets of such is the most laborious duty we have to perform. It would give us great pleasure to receive the accounts of the exhibitions of every society in the country ; and we would give them altogether in the December number, in the same manner as in Loudon's Magazine. We would respectfully call the attention of those persons interested in gardening to our remarks.

Essex County Natural History Society.—The annual meeting of this Society was held on Wednesday the 15th of June, at their room, in Salem. There was a very good display of flowers for the season, and a large number of visitors continued to throng the rooms until the close of the exhibition. Among the contributors we noticed the following names :—Messrs. D. Treadwell, C. Lawrence, J. C. Lee, J. S. Cabot, F. Putnam, E. Putnam, J. L. Russell. F. Putnam contributed some fine specimens of Smith's yellow noisette rose—in one bouquet we counted four fine flowers ; he also sent fine specimens of *Cereus speciosissimus*, *Pæonia Moutan* var. *Banksia*, *Alstræmeria psittacina* and tricolor ; several varieties of geraniums, among which was Queen of Scots ; calceolarias, tradescantia, *Salvia splendens* and *fulgens*, double white rockets, &c. &c. From J. C. Lee, salvias, African day-lily, Scotch roses, calceolarias, Persian lilacs, geraniums, &c. From Prof. J. L. Russell, *Rosa ferox*, a beautiful large single rose ; *Pæonia albiflora*, and some other plants. Numerous specimens of indigenous flowers were contributed from various persons, among which were cypripediums, phloxes, viburnums, violets, wild cherry, and many others, including the exquisite little *Linnaea borealis*, which is found, we believe, only in one locality in this vicinity. We were happy to perceive

this growing taste, more especially for the wild plants of our fields and pastures ; and we trust that we shall oftener see them mingled in with the foreign plants, in the borders of the gardens of every true lover of Flora.

At half past three o'clock in the afternoon, an address was delivered before the Society, by Prof. J. L. Russell. The subject was Natural History in its various branches. We wish we could follow Mr. Russell through his highly eloquent and interesting address, and enlarge upon some of the most important points ; but our limits will not allow of this. The Society will undoubtedly publish the address, and, should we be favored with a copy, it will give us much pleasure to lay some extracts before our readers.

Maryland Horticultural Society.—The anniversary meeting of this Society was held at Baltimore on the 21st of June, 1836. Officers were chosen for the ensuing year, and premiums announced for articles exhibited from June, 1835, to June, 1836. The following is the report of the various Committees :—

Vegetables—To W. McBurney, for the best cauliflowers ; to James Stranoch, for forced lettuce ; to Thomas Dixon, for open ground lettuce ; to Richard Valentine, for open ground rhubarb ; to Thomas French, for be-ts ; to Caleb Whittemore, for cape brocoli ; to Thomas Kehoe, for celery ; to William Feast, for egg plants ; to Thomas Dixon, for tomatoes ; to Peter Coombs, for salsify ; to James Maidlow, for pickling cucumbers ; to Thomas Dixon, for Lima beans ; to Peter Nantz, for crooked neck squash ; to William McBurney, for early York cabbages ; to Edmund Kean, for early potatoes ; to Thomas Kehoe, for mushrooms ; to F. E. McHenry, for onions from seed ; to Edmund Kean, for asparagus, the amateur premium ; to John Feast, for his new variety of cucumber, called the “superb Long Green,” a specimen of which measured two feet seven inches, a discretionary premium.

Fruits—To Samuel Feast, Jr., for the best strawberries ; to Richard Valentine, for gooseberries ; to Caleb Whittemore, for raspberries ; to Richard Valentine, for grapes ; to Mrs. Forney, for plums ; to Wesley Hancock, for early apples ; to H. V. Somerville, for early peaches ; to Mrs. H. Birkhead, for apricots ; to Robert Gilmor, Sen., for figs ; to Henry Thompson, for cantaloupes ; to Henry Moore, for pears ; to Peter Coombs, a discretionary premium for his late pears ; to Miss E. Schröder, a discretionary premium for her fine Spanish chesnuts ; to Gen. T. M. Forman, a discretionary premium for his late cherry.

Flowers—For the best collection of the *Camellia japonica*, including the greatest number of kinds and finest bloom, to Samuel Feast ; for the best seedling *Camellia japonica*, to Zebulon Waters ; for collection of dahlias, to John Feast ; for seedling dahlias, to Gideon B. Smith ; for azaleas, to Edward Kurtz ; for amaryllises, to Edward Kurtz ; for collection of pelargoniums, to J. Feast ; for seedling pelargoniums, to Z. Waters ; for China roses in open ground, to S. Feast ; for chrysanthemums, to Mrs. Geo. H. Keerl ; for carnations, including seedlings, to Z. Waters ; for tulips, to Thomas Edmondson ; for hyacinths, to Mrs. B. I. Cohen ; for primula polyanthuses, to Samuel Feast ; for collection of succulents in bloom, to the Gardener of St. Mary's College ; for collection of herbaceous plants, to Jno. Feast ; for the finest and rarest exotic, the amateur premium, to Samuel Feast ; a discretionary premium to William Wilson, for his fine seedling dahlia, the Huntingdon.

Upwards of two hundred dollars were given away in premiums.
(Farmer and Gardener.)

ART. VI. Quincy Market.

	From		To			From		To	
	\$	cts.	\$	cts.		\$	cts.	\$	cts.
<i>Roots, Tubers, &c.</i>					<i>Squashes and Pumpkins.</i>				
Potatoes :					Common crookneck, per cwt.	none.			
Common, { per barrel, . . .	1	00	1	25	West India, per pound,	2		3	
{ per bushel, . . .		37½		50	Pumpkins, each,	none.			
Chenangoes, { per barrel, . .	1	25	1	50					
{ per bushel, . .		50		62½	<i>Pot and Sweet Herbs.</i>				
Eastport, { per barrel, . . .	2	25	2	50	Parsley, per half peck,	50		75	
{ per bushel, . . .	1	00			Sage, per pound,	17		20	
Nova Scotia, { per barrel, . .	2	00	2	25	Marjoram, per bunch,	6		12	
{ per bushel, . .		75	1	00	Savory, per bunch,	2		6	12
Turnips :					Spearimint, per bunch,	6			
New, per bunch,		10							
Yellow Freuch, per bushel, .	1	00	1	50	<i>Fruits.</i>				
Onions :					Apples, dessert :				
Old, per bushel,		none.			Baldwins, { per bushel, . . .	none.			
New, per bunch,		6	8		{ per dozen, . . .	25		50	
Beets, per bunch,		12½			Russetts, { per barrel, . . .	4	00	5	00
Carrots, per bushel,	1	00	1	25	{ per bushel, . . .	2	00	2	25
Parsnips, per bushel,		75			Strawberries, per box: (1 qt.)				
Salsify, per bunch,		12			Keen's Seedling,	75		1	00
Horseradish, per pound,		8	12½		Common,	50		75	
Shallots, per pound,		20			Nood,	37		50	
Garlic, per pound,		14			Cherries, per quart,	50		75	
					Gooseberries, (green) pr quart.	12½			
<i>Cabbages, Salads, &c.</i>					Currants, (green) per quart, . .	6		8	
Cabbages : per dozen,					Watermelons, each,	1	00		
Old,		none.			Pine Apples, each,	10		25	
New, each,		12			Grapes: per pound,				
Cauliflowers, each,		none.			Malaga,	37½		50	
Lettuce, per head,		3	6		Hot-house,	1	00	1	25
Radishes, per bunch,		3	6		Cucumbers, each,	12½		25	
Spinach, per peck,		12½	17		Cranberries, per bushel,	3	00	4	00
Dock tops, per peck,		12½			Oranges, { per box,	4	00		
Beet tops, per peck,		12½	17		{ per dozen,	25		50	
English Sorrel, per half peck, .		25			Lemons, { per box,	2	50		
Water Cresses, per half peck, .		25			{ per dozen,	20		25	
English Mustard, per half p'k,		12½	17		Shaddocks, each,	25			
Rhubarb, per pound,		4	6		Chestnuts, per bushel,	none.			
Asparagus, per bunch, (25 ea.)		10	12½		Walnuts, { per barrel,	3	00	3	50
Peas : { per bushel,	1	50	2	00	{ per bushel,	1	75	1	75
{ per peck,		37½	50		Almonds, (sweet) per pound, . .	12		14	
					Filberts, per pound,	4		6	
					Castana,	3		6	

REMARKS. The unprecedented cold, wet, and cloudy weather, with easterly winds, which has prevailed, with scarcely the intermission of a day of sunshine, since the date of our last, has tended to greatly retard the ripening of fruits and the maturing of early spring vegetables. As we anticipated, if the cold weather continued, which was then prevalent, such products as we get early in June would not, this season, come to hand until a later period. The supplies have been barely sufficient to meet the demand, and prices remain high. Of potatoes there is a moderate stock on hand: prices are firmer, and Nova Scotias somewhat higher: the supply will be wholly diminished by the time new ones come in. Turnips are plenty, and very fine. Onions are very scarce; no old ones are to be found, and the spring crop is very

light, the severity of the winter having partially destroyed many large plantations. Carrots, beets, &c. are nearly all gone. Radishes are very plenty. Of cabbages a few heads of this year's crop have come to hand this week, and sold readily at quotations; they were rather small. Lettuce continues abundant and cheap. Beet tops and spinach are now more plentiful than other greens. Water cresses are gone. Asparagus keeps up at a remarkably high price, and the supplies have been small. Rhubarb is plentiful. Peas have been in the market but a few days, and prices are yet high; they are tolerably well filled. West India squashes are more abundant than we have ever known them; and the great number which are weekly brought into this market has caused quite a depression in the price.

Apples continue scarce; our quotations will show the advance of prices: a few, commonly termed the rock apple, are to be had, which are very fine. Strawberries are not abundant, nor of very good quality; the cold wet weather having prevented them from acquiring their peculiar fine flavor; a few Keen's seedlings have come to hand, of very large size; Early Virginias, royal scarlets, and the old Wood, are the most abundant. Methven scarlets are now considerably cultivated, and their fine appearance commands for them a good price. A few cherries from New York came to hand to-day, of rather ordinary quality. Green gooseberries and currants for tarts are plenty. Some watermelons from the West Indies also made their appearance in the market this week; they sold readily at our quotations. Pine-apples are very plenty, several thousand having arrived during the last fortnight. White sweet water and black Hamburg grapes, from hot-houses in the vicinity, came to hand this week; they were exceedingly fine. Cranberries are very scarce, and few remain on hand. *Yours, M. T., Boston, June, 1836.*

ART. VII. *Meteorological Notice.*

FOR MAY.

THE month of May, up to about the 20th, was very fine, with but few cold winds and but little rain. The morning of the 14th was rather cool; in some places water froze, and early crops were considerably injured. After the 20th the wind, which had previously ranged from S. E. to S. W., set in from the N. E., accompanied with a cold drizzling rain, which continued until June.

THERMOMETER.—Mean temperature, 53° 20'—highest, 79°; lowest, 16° 32' above zero.

WINDS.—N. E. eleven days—E. five—S. E. two—S. seven—S. W. three—W. two—N. W. one day.

Force of the Wind.—Brisk, twenty-one days—light, ten days.

Character of the Weather.—FINE, thirteen days—FAIR, eight days—CLOUDY, ten days.

Rainy, seven days.

MONTHLY CALENDAR
OF
HORTICULTURE AND FLORICULTURE,
FOR JULY.

FRUIT DEPARTMENT.

Grape vines in the green-house or grapery, will by this time have made a growth nearly to the top of the house; keep the tendrils and laterals cut off, as before recommended, and the wood will be much stronger: also keep them tied up to the trellis, and not let the shoots run together. Give attention as directed in our last, and on no account neglect to look over the vines at least every other day. The grapes will now have acquired the size of small peas, and will be swelling very rapidly; give them frequent syringings, and, if the weather continues dry, the borders should be flooded with water. Attention should be given, and the clusters thinned out, so that berries will not crowd one another. *Vines* in the open air will now have set their fruit; keep them regularly trimmed, and occasionally water with liquid manure.

Grape eyes in pots should be kept well watered, and the shoots tied to strong stakes.

Peach trees in pots should be kept well watered, and the fruit thinned out, this month.

Plum trees should be looked over, and all the fruit that falls from them should be given to swine.

Strawberry beds should now receive attention. As soon as the fruit is all picked, give the beds a good weeding, and cut away all small superfluous runners; if none are wanted to make another bed, let them be cut away altogether. Where wanted for forcing, the runners may be pegged into pots filled with a rich soil, and, when rooted, cut off, and removed to a shady situation.

FLOWER DEPARTMENT.

Dahlias may yet be planted; and, if the weather continues warm and the plants are tolerably strong, they will bloom abundantly. We have known small plants raised from cuttings the latter part of June, planted out in July, produce flowers through all the months of September and October. Set in a *deep rich sandy* soil. Stake those plants set out in June.

Azaleas may now be propagated from cuttings planted in sand.

Biennial and perennial seeds may yet be planted—sow in a light rich soil, well pulverized; transplant as soon as the plants are two or three inches high.

Carnations may be now layed with success. Seedlings raised in boxes should also be transplanted into the border.

Annual flower seeds of many kinds will bloom finely in September and October, if now sown.

Calceolarius should be propagated from cuttings this month.

Tulips, ranunculuses, hyacinths, &c., should be taken up this month; choose a dry day to do this.

Rose-bushes infested with the *aphides* should be syringed with tobacco-water. Plants may be budded the latter part of the month.

Geraniums.—Cuttings of these should now be put in. For directions see Vol. I.

Green-house plants of all sorts may be propagated this month.

THE
AMERICAN
GARDENER'S MAGAZINE.
AUGUST, 1836.

ORIGINAL COMMUNICATIONS.

ART. I. *Remarks on the Fitness of the different Styles of Architecture for the Construction of Country Residences, and on the Employment of Vases in Garden Scenery.* By A. J. DOWNING, Botanic Garden and Nursery, Newburgh, N. Y.

It is in the highest degree gratifying to witness the rapid improvement in the taste for building, which is extending itself throughout the country. Here, where from the scarcity of good architects to direct the public taste, that taste must be formed and controlled, in a great measure, by the landed proprietors themselves, it reflects the more credit upon its possessors. From the buildings of a country, as they exhibit, in their external appearance and internal arrangement, the evidences of comfort, convenience, elegance of proportion, and beauty of detail, the traveller indeed may form a very just opinion of the character of its inhabitants;—he can distinguish, in different countries, the general march of civilization, exhibited in the wants of those inhabitants, dependant upon the degrees of intelligence and cultivation of which they may be possessed—from a savage state of barbarism, when man subsists by hunting, and constructs for himself a rude hut of bark or logs, to those refined stages of society, in which the luxury of man has caused him to expend millions in the erection of a single palace.

Judging, in this manner, of the state of a population by their apparent wants, in the domestic and social relations, and the perfection of the art by which they satisfy those wants—we conceive that, in the Northern and Middle States, the stranger must derive a highly favorable impression from observations of this nature. The great number of tasteful villas, neat farm-

houses and comfortable cottages scattered every where, by the borders of our high-roads, on the margins of our rivers and in the neighborhood of our towns and cities, display an air of almost universal neatness and enjoyment, that speaks louder than words in favor of the moral and intellectual condition of the inmates. If there are but few splendid mansions and costly palaces, there are, on the contrary, but few of those materials which form the almost invariable accessories to such pictures—few miserable hovels and comfortless tenements, bespeaking poverty and misery in their inhabitants.

We have noticed, with much pleasure and a slight degree of fear, the great prevalence of the Grecian style of architecture in our buildings erected for country residences, within a few years past ;—pleasure, because a Grecian villa, with its elegant proportions and chaste purity of style, is one of the most beautiful of all structures for the habitation of man ;—fear, that, in the universal mania for the five orders, our country gentlemen would either entirely forget, or argue themselves into the belief, that there is no architecture but the Grecian. There is nothing which contributes so much to the wonderful beauty of *nature* as her endless *variety*. The most chaste and pleasing object may weary to the eye by constant repetition, and the most classic and correct style of Grecian architecture may become monotonous and tiresome, if every structure that we meet with, from the smallest cottage upwards, is ornamented with its Doric, Ionic or Corinthian portico. This is not all. In the perpetually varied surface which the face of our country assumes, it is not alike in every situation that the Grecian architecture is appropriate. The smooth or gently undulating plain—the smiling cultivated country, and that peaceful expression of the landscape which is in good keeping with, and should accompany the horizontal lines and regular symmetry of the Grecian style, are by no means to be found in every situation, nor is it, in all cases, desirable that they should be component parts of every country residence. On the contrary, many persons prefer, or are attached, by associations, to districts of country where the features are wilder, more romantic and picturesque—where the hand of man has been only partially laid upon the forest, and where, in her lofty mountains, rugged defiles and shadowy woods, nature has stamped a character of rugged grandeur and beauty upon the scene, which art may never efface. It is not in such situations that a person of taste will desire to see, or feel satisfied with, the polished style of the Greek temple. He will rather prefer a style like the Gothic, which sprung up among the rocks and fastnesses of the northern nations of Europe, and which, from its very origin, nature and character, is admirably adapted to harmonize with nature in her wildest and most picturesque aspects. The Gothic and baronial

castles have, it is true, passed away with those feudal times which gave rise to them ; but the Gothic architecture is by no means less adapted to the wants of modern life. On the other hand, the Gothic cottage, irregular and picturesque in its outline, may, in its internal arrangement, be made to conform to the requirements of domestic life, while, unlike the Grecian (which is a whole in itself), subsequent additions may be made to the edifice, and only add to the beauty and good effect of the entire building. By thus adapting the style of architecture to the character of the scene in which it is placed, a point quite lost sight of in works upon architecture (and which, as there is no practice of landscape gardening in this country, may be very properly inculcated through a medium like the present), a harmony and variety is produced by these two styles alone, which will be productive of the highest pleasure. But, in the erection of country residences, we would by no means desire to be limited to these two styles, and, like some architects, consider every thing else barbarous. On the contrary, we consider any style of architecture the most suitable and proper, which shall be found, in the most perfect manner, to attain and answer the ends desired. In this point of view, it is perhaps questionable whether the Grecian, with its open colonnades, so delightful under a warm sky, is as suitable for a northern climate like ours, as the Gothic, with its thick walls and comfortable apartments. But as we have all the extremes of temperature in this climate which are found under the remote zones of latitude, a greater variety of forms may also be permitted in building, than in either a very hot or cold country.

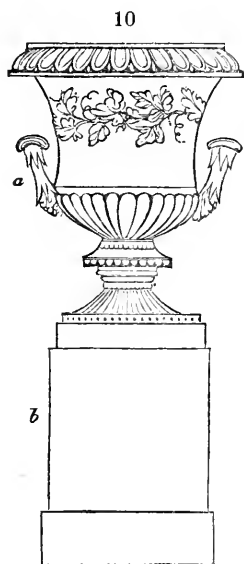
In applying these two principles, *viz.* fitness to the end desired, and harmony of expression with the landscape, to the villas and seats of our inhabitants, a person of judicious taste will readily perceive great faults, both in the style of architecture selected, and in the choice of the sites ; and it cannot also fail of occurring to him how many beautiful and admirably adapted forms for private dwellings are totally neglected, from a perverse blindness to every thing but the prevailing mode. There can scarcely be a more appropriate, agreeable and beautiful residence for a citizen who retires to the country for the summer, than a modern Italian villa, with its ornamented chimneys, its broad *verandah*, forming a fine shady promenade, and its cool breezy apartments. Placed where a pleasant prospect could be enjoyed—a few statues distributed with taste over the well-kept lawn—a few Italian poplars, with their conical summits rising out of the gracefully-rounded clumps of foliage which should surround it—the whole would be quite perfect and delightful. If, again, we imagine a quiet village, nestled at the foot of some of our fine mountains, in the neighborhood of which is a pretty picturesque

valley, with a glimpse at the blue sky, rocks, and a waterfall, pure air and a delightful mountain-view—place there a neatly constructed Swiss cottage, with its long projecting eaves, curious galleries, and quaint flight of stairs—a small farm stolen from the surrounding hills, with a few cattle grazing in the fields—perchance a goat or two browsing near the house, and the picture is complete. It is a mistake to suppose, with many, that the same degree of comfort and even of luxury may not be attained in structures of this kind as in a Grecian villa. The same elegance in the apartments, furniture and decorations, always keeping sight of a unity of expression, may be permitted; and, in short, those who are acquainted with the original form of the Greek temple, the prototype of our modern buildings, and are aware how apparently unsuitable such forms and proportions are to our domestic purposes, will at once appreciate how easily even a Swiss cottage can, by a judicious taste, without altering its character, be so arranged internally, as to give the greatest possible share of comfort, convenience and elegance.

There is, also, yet much room for improvement among us, with regard to the *situation* of the house, and the laying out of the grounds which surround it. It is by no means rare to find some of our finest houses, in the country, where there is no scantiness of surface, placed within a stone's throw of the high-way. This, however, but betrays the influence of habit. In the first settlement of every country, of course the society of our fellow-beings is strongly desired; the highways being the only means of communication, and the houses but thinly scattered, they are very naturally placed so as to attract the eye of the passer by, and be easy of access. But, in a comparatively thickly settled country, *retirement* is the great desideratum, and, upon estates of any extent, therefore, the mansion should be placed at such a distance from the public road, as that the approach may give some idea to the stranger of the extent of the grounds. It is needless to lay down any rules for the formation of this approach-road, as, in all cases, it will depend so much upon the situation. We would rather rely upon a general unity of expression, than upon any fixed rules. Neither do we conceive that, in this country, we are by any means bound to follow undeviatingly the European modern style of laying out the grounds. In a highly cultivated country like England, where the most striking features of nature are in a great measure effaced by art, a pleasure-ground, formed in the *natural* style, is capable, by *contrast*, of affording the greatest pleasure. For the same reason, here, where nature still riots unsubdued in all her magnificence and grandeur, it would, in many cases, be idle and absurd to attempt to imitate her. An artificial cascade, or the water-works of Versailles, would be but paltry affairs, if placed by the side of

Niagara. There is, however, room for the display of various styles, as well in laying out ground as in building, and, in the neighborhood of the old Atlantic cities, well kept grounds, in the modern style, would be at once appropriate and delightful. So also in those wilder situations in the country, where nature exists in her pristine loveliness, the eye is occasionally delighted to witness the work of art—a fine building and a stately avenue. In short, the ultimatum of our wishes is, to see our numerous and intelligent landed proprietors exercising a well cultivated and nicely discriminating taste, with which, taking advantage of the location, they would produce, in their buildings and grounds, the greatest beauty and enjoyment, combined with a perfect harmony of expression, in the whole scene.

It will not be inadvertent to the present hasty remarks to hint at the additional charm which may be produced in highly finished places, especially where the buildings are in the Grecian style, by introducing into the lawns and gardens the classic *vase* in its

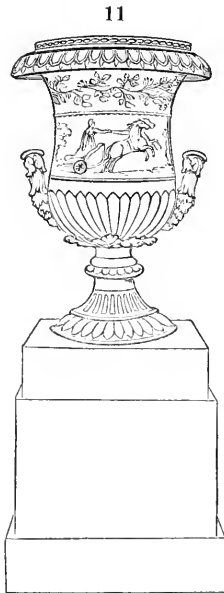


different forms,* and, if thought desirable, statues also. They serve as it were as a connecting link between so highly artificial an object as a modern villa, and the verdant lawns and gay gardens which surround it. Elevated upon pedestals, and placed at suitable points in the view—on the parapets of terraces near the house—before a group of foliage upon the lawn, and at proper intervals in the garden, they give a classic and elegant air to the whole, which adds greatly to its value. Beautiful in their forms, contrasting finely with the deep green of vegetation, and leading the eye gradually from their own sculptured beauty to the architectural symmetry of the building, of which they form as it were a continuous though detached part, amalgamating it with the grounds in which it is placed—their effect can

only be appreciated beforehand by those who have studied the excellent effect produced by their introduction into the scene.

* The above are copies of two handsome and cheap vases now manufactured in New York. *Fig. 10* is two feet six inches high, without the pedestal (*b*), and is formed of plaster or Roman cement (so prepared as to withstand the weather), at Coffee's manufactory, Canal Street, New York, where many other fine patterns may be found. The

Another reason which may be offered for the introduction of vases into architectural and garden scenery is “the gratification which such objects afford to the man of intelligence and taste.



There are, perhaps, few objects, next to the human figure, which afford as many interesting historical associations as the vase. It may truly be said to be the first and last production of the plastic art. The first utensil formed by man, in the dawn of civilization in every country, is a vessel or vase for holding water; and that on which the highest resources of art are bestowed, in ages of the greatest refinement, is a vase or vessel for holding wine. In the first case, it is hollowed out of a gourd, or rudely shaped of clay, and dried in the sun; and, in the latter case, it is manufactured of costly metals or precious stones; or, if of common materials, such as stone, earthenware or glass, it is rendered valuable by the taste and skill bestowed on its form and ornaments.

The history of every country may be traced by its vases no less than by its coins; and the history of all countries is set before us in the vases of all countries.” *

vase is beautiful and the workmanship excellent. *Fig. 11*, three feet four inches high, is a fine terra-cotta vase, which may be bronzed or colored in imitation of marble. This vase has a handsome *bas relief* upon the sides, and is manufactured at the Salamander works, 82 Cannon Street, New York. These and all other vases should never be set down directly upon the lawn or in the garden, but placed upon proper pedestals (*b*), as shown in the *figures*.

* Loudon, X. 494.

ART. II. *On the Cultivation of Brompton and Ten-week Stocks, for producing Flowers in the Spring.* By the CONDUCTORS.

THE beauty and fragrance of all the stock tribe, or gilli-flowers, as they are often termed, is so well known, that it is unnecessary for us to eulogize them at this time ; though common in every garden, from that of the most humble cottage to that of the grandest palace, yet they lose none of their attractiveness by their general cultivation.

To blossom stocks in perfection some little care is requisite, especially when wanted to display their flowers in the spring months. They are of that class of plants which throw out few, very few fibrous roots, and are consequently difficult of removal ; if the plants are large the operation of transplanting is generally attended with a loss of half or two thirds of them, however so carefully it may be performed ; and, as the common mode of growing them is to sow the seed in the open border, in spring, and remove the plants into pots upon the approach of frost, in the autumn, when they are of large size, a great majority of the plants are annually lost. Double flowers only are desirable ; and as the Brompton stocks do not show their blossoms the first season, so as to distinguish them, a large part of the number taken up are generally single ; this, in addition to the loss of the plants, occasions great disappointment, and often, out of some dozens of seedlings, the cultivator has left, in the blooming season, only ten or twelve good plants.

To obviate these difficulties, the following mode of growing the plants may not be unacceptable ;—perhaps the space which we occupy in this detail might be much better employed in giving the manner of cultivating rare plants,—but as the stock is not yet grown to near that perfection with us as with the English gardeners, we hope we shall be excused for throwing out a few hints on the subject. We commence first with the perennial stocks.

The Brompton stock (Mathiöla incana).—The Brompton, Queen, and other perennial kinds, with the different varieties, which now amount to upwards of twenty, are all cultivated in nearly the same manner, and these remarks apply equally to each.

The only way of raising the plants successfully is from seed : we have known them propagated by cuttings, and have so grown them ourselves, but they were weak stunted plants, and not worth having. We would never recommend to the amateur or gardener this mode of procuring his plants, as it will cause much care and labor, without his receiving any reward in return. The

object of growing the stock from cuttings is to perpetuate any particularly fine double variety ; but if pains is taken in sowing the seed, or if good is procured from any seedsman, a majority of the plants will come double : we have known instances where five out of six of the ten-week stocks have been full double.

The seed should be sown early in June, in partially shaded situations—perhaps on a border facing the north, by no means on a south one, as the sun would be too powerful—in drills eight or ten inches apart. The soil should be made light, rich, and fine, and the seeds covered about a quarter of an inch deep ; they will soon make their appearance above the soil, and should be thinned out so as to stand about four inches apart in the rows. If dry weather ensues, give them gentle waterings, with soft water, and they will grow rapidly : keep them clear of weeds. About the latter end of the month, or early in July, preparation should be made to take them up into number two pots. For this purpose, have ready some good rich sandy loam ; take up the plants carefully, and, when all are potted that are wanted, give a good watering, and set them in a shady place for a week or two ; afterwards remove to a sunnier aspect, where they may stand until August, when they must be shifted into number threes. Give them plenty of water, and, upon the approach of frost, they may be taken into the green-house, or wintered in frames.

In the month of February, as many as are wanted to flower in pots should be repotted into number fours, in a similar compost to the above named ; the remainder can be kept in the same pots until May, and then turned into the flower border, where they will make a fine display in June and July. The plants should be kept liberally supplied with water, during the spring growth, and they will throw up strong spikes of blossoms. The seed may be sown in July and early in August, but the plants will not be near so strong, although they will show tolerably fine flowers. The pots can be plunged in the ground after their best bloom is over, and, if the plants are headed down and repotted into a larger size before they are taken into their winter habitation, they will produce abundant spikes of fine flowers the ensuing spring.

The Ten-week Stock (*Mathiola annua*).—The ten-week stock does not require so much care to bloom it to perfection as the Brompton. It is easily grown as an annual plant, and masses of it planted out in the border have an elegant appearance, and fill the air with its delicious fragrance : indeed, it is one of those valuable annuals without which, the mignonnette, and some one or two others, our gardens would be destitute of fragrant blossoms throughout the summer. There are now an immense number of varieties, including what are called the new Russian, or close flowering, and the new German stocks ; of each of

these there are varieties of all shades, from the purest white to the deepest purple, and also spotted, edged, and variegated kinds. To German gardeners and amateurs we are indebted for the improvement of this fine tribe.

Seeds of the ten-week should be sown at different periods, as the plants are wanted to bloom in succession. Some English cultivators make five or six sowings; but three, or four at the most, are sufficient to ensure a good succession of flowers: these may be made in February, April, June and August. The sowing in the two former months should be made in pots in the hot-bed; the two latter do equally as well in the open border. All that is necessary in February is, to keep the plants from drawing up weak, by giving plenty of air: in April there will be no danger. The June and August sowings may be made in the same manner as recommended for the Brompton stock. As soon as the plants have made four or five leaves, transplant them carefully into number *one* pots, in which they may be kept through the winter: observe the same care in regard to shade, water, &c., as recommended for the Brompton. By thus putting them in small pots, a great quantity of plants can be kept in a little space. Early in February repot those wanted to bloom early, into number threes, in a soil composed of three quarters light sandy loam and one quarter well decomposed manure. Those not repotted may be turned into the border as soon as the weather will permit. By this method the plants will be strong and bushy, with numerous spikes of handsome flowers.

If the plants are sheltered in frames, care should be given that it is not too wet, as they would be likely to damp off. The bottom of it should be made dry, and the plants set on boards. A green-house is not so good a place for them as in a frame, but they do very well in the former.

There are a number of varieties of the ten-week stock, and also the Brompton, called the wall-leaved; that is, with foliage like the wall flower. They are extremely beautiful, and should not be forgotten in a collection. The German catalogue enumerates upwards of twenty of them.

We are anxious to see the stock cultivated to greater perfection than it yet is; but we know that many persons do not grow them, only in the open garden, as they do not succeed in flowering them well. We hope, therefore, these few hasty remarks will tend to render their cultivation easy to every admirer of this fine family.

We have spoken of the Brompton stock as perennial: perhaps in this we may have erred; most writers term it biennial, but we have seen fine strong plants in elegant bloom, the *sixth* year from the seed. If not strictly perennial, it is certainly more than biennial.

ART. III. *Calendar of Plants and Shrubs in bloom from the month of May to October, inclusive.* By the CONDUCTORS.

WE continue our remarks under this head for the month of June. The flower-garden, during this month, begins to make a considerable display, by the successive blooming of the various perennial plants and ornamental shrubs, among which the charming rose holds pre-eminence. By a judicious selection of kinds, of this richest of all ornaments to the garden, a succession of flowers may be kept up for upwards of a month. The finer varieties of pæonies also display their magnificent blossoms in June.

In gardens, where there are green-houses attached, lemon and orange trees, myrtles, acacias, and such shrubs, should be placed in conspicuous situations on the border, or, if of spacious dimensions enough to embrace a lawn, they will show to most advantage upon that. Aloes and yuccas have a singular appearance; the former, with their thick fleshy leaves, and the latter, with their stiff and rigid foliage, contrasting admirably with the surrounding plants; if large specimens, and growing in handsome vases of the height of two or three feet, they are still more attractive. The cultivation of plants in vases we hope to see become very general; in small gardens and spots of ground in thickly settled towns, and, more especially, in cities, in front of dwellings, where there is not room to cultivate the soil, plants growing in vases elevated in the summer season on pedestals above the railing, so as to stand in full view of persons passing in the street, will add greatly to the decoration of such places, and give them a cheerful character. In village gardens, highly picturesque effects may be produced by placing such in situations where, unobserved in a general view of the garden, they will, when its parts are more closely inspected, show themselves suddenly to the stranger, and, by astonishing him with their appearance, interest him by their elegance and classic finish.

But we have digressed somewhat from the course of our subject, and must again return to it.

June.—The most splendid productions of the garden this month are the azaleas, rhododendrons, laurels, andromedas, magnolias, &c. Of the species and varieties which are truly desirable, we enumerate *Azàlea calendulàcea*, *nudiflòra*, with several of its varieties, particularly *coccínea* and *ròsea*, *póntica* and *p. álba*, *lùtea*, *pállida trícólor*, &c.: *Rhododéndron máximum*, and *catawbiéense*, *Magnòlia tripétala*, and *Andrómeda paniculàta*; *Kálmia angustifòlia* and *latifòlia* are charming species, and should be planted in every garden, however small. Of the perennials and biennials which are in bloom this month, are

Pentstemon ovatum, *diffusum pubescens*, and *roseum*, *Gailáirdia aristata* and *bicolor*, *Phlox maculata*, *bimaculata*, *glomerata*, *disticha*, *sauveolens*, and *ovata Listoniàna*; all beautiful, particularly so the latter: *Potentilla réptans* *flòre plèno*, charming for rock work; *Papàver orientàlis* and *bracteatum*; splendid plants: *Delphinium sinènsis* *flòre plèno*, *máximum fl. pl.*, and *élegans fl. pl.*; among the most splendid of the perennials, and growing without the least care: *D. elatum*, and *exaltatum*, both ornamental for their tall growth and long spikes of blossoms: *Spiræa filipéndula*, and *filipéndula fl. pleno*, highly showy and elegant: *Dictamnus álbus*, *Verónica latifolia* and *caucásica*: *Valeriàna rùbra*, *Campánula aggregata*, *pùmila*, *elíptica*, and *médium*, of both colors, blue and white; the former species is quite new and exceedingly beautiful: *Eschscholtzia califòrnica*, *Astrántia màjor*, *Lychnis Flòs Jòvis*, *Lupinus polyphyllus*, *Sophòra austràlis*, foxgloves, purple and white, sweet-williams, pinks and carnations; *Lilium spectabile*, *Iris sibèrica*, and *Hemerocállis flàva*. Of shrubs, beside the rose, are the guelder rose (*Viburnum Opulus*), and *Robínia hispida*, *Spiræa bélla*, the snowberry and syringas (*Philadélphus coronàrius* and *grandiflorus*).

Among the pæonies, the most magnificent display their gorgeous blossoms this month; such as *P. albiflora* *Whitleji*, *Hùmei* and *fràgrans*; *officinàlis álbianca*, *rùbra* and *atrorùbens*, and *paradóxica fimbriata*: *P. Reevesiàna* is very splendid, but is quite rare; no plants can surpass in splendor these species and varieties; they will grow in any situation, and are valuable to set in shady places and under trees, where but few other plants will flourish; in these habitations they retain their flowers in beauty a much greater length of time than when grown in places exposed to the sun. We had almost forgot to mention, that foxgloves possess this same excellent quality; we have seen them with flower-spikes from *five* to *six* feet high, under the shade and drip of trees, where the sun could not penetrate. Of our indigenous plants the cypripediums are exceedingly handsome, and deserve a place in every garden. Single and double Scotch roses come into bloom the earliest; after these the cinnamon roses (*Ròsa cinnamòmea*), and, successively, the old white, province, and damask, with all their innumerable varieties. The best sorts of hardy climbing roses are the *Ròsa rùbra* and *rubifolia*, the double Ayrshire, and the old and new crimson Boursault, the latter of which is superb.

The same observations which we made in our last relative to turning plants into the border, from the green-house or pit, if either is attached to the garden, apply to the different operations this month as well as in the last. As soon as the perennials have done flowering, cut away the dried-up stems, and many

kinds will throw up new ones, which will be covered with blossoms. Give attention to tying up all high or strong growing plants, as the wind will sometimes in a few minutes destroy all that the cultivator has lavished hours of his care upon to bring to perfection.

ART. IV. *Some hints on the Propagation and Treatment of the Sweet-scented Verbena (Alòysia citriodora).* By AN AMATEUR.

THIS fragrant plant, which is a favorite with every lady, is very easily grown, and, if planted out in the open border, in the summer, in a warm situation and on a light, rich sandy loam, it attains the size of a large bush.

During the months of July or August, cuttings may be put in, and they will grow without any difficulty. When the new shoots have made a growth of three or four inches, take them off from where they started without using the knife, as they will root sooner by so doing. Strip off about half of the leaves, and insert them in a pot filled with leaf mould and sandy loam, with a small portion of sand : six or eight cuttings can be put in a pot four or five inches across. Place them in a shady situation ; if a frame is at hand, they would do well in that : some persons make use of a bell glass ; but I have never had scarcely a failure without them.

When they are rooted, which will be in the course of three or four weeks, they can be potted off into small pots, using the same compost as recommended for the cuttings. Place the plants in a shady situation until they strike out new roots, when they may be removed to a warm aspect. If all the plants are not wanted in the pots, they can be set in the border, where they will make a strong and rapid growth, and furnish abundance of shoots for cutting for bouquets. This is the best way to manage them, as, in the winter season, they lose their foliage, and are mere dry sticks. To preserve them, however, a quantity of young plants must be kept in pots, as they make such a mass of roots, when growing in the border, that it is almost impossible to transplant them.

Upon the approach of cold they may be removed to the cellar, a frame, or placed under the stage of a green-house. I have kept them in either of these places with equal success.

When the plants are taken out in spring, head them down, and this will cause them to throw out strong new shoots; they may also, if wintered in small pots, be repotted into a larger size. For the parlor no plant is better adapted; and the delightful odor of its foliage, combined with its pretty habit, render it at once attractive.

June 16, 1836.

Yours,

AN AMATEUR.

ART. V. *Notices of new and beautiful Plants figured in the London Floricultural and Botanical Magazines; with some Account of those which it would be desirable to introduce into our Gardens.*

Edwards's Botanical Register, or Ornamental Flower Garden and Shrubbery. Each number containing eight figures of Plants and Shrubs. In monthly numbers; 4s. colored, 3s. plain. Edited by John Lindley, Ph. D., F. R. S., L. S., and G. S., Professor of Botany in the University of London.

Curtis's Botanical Magazine, or Flower Garden Displayed, containing eight plates. In monthly numbers; 3s. 6d. colored, 3s. plain. Edited by William Jackson Hooker, L.L. D., F. R. A., and L. S., Regius Professor of Botany in the University of Glasgow.

DICOTYLEDONOUS, POLYPETALOUS, PLANTS.

Ternstroemiaceæ.

CAMELLIA

japonica var. *Donckelaeri*. Donckelaer's Japan Camellia. A splendid green-house shrub; growing six to eight feet high; with variegated white and red flowers; appearing from February to April; propagated by grafting and inarching; introduced to Holland from China. Bot. Reg., 1854.

This is a new and splendid variety of this magnificent tribe, which is said to have been lately brought to Holland by Dr. Siebold, where it flowered, we believe, for the first time, in 1834. The flower is not very double, from the representation of the plate, but the petals are of a rich crimson color, beautifully blotched and spotted with white, something in the style of *Chandlèri*. It is stated to be a genuine Japanese variety. The drawing was taken from specimens communicated by Mr. Lowe of Clapton, in whose establishment it flowered the past winter: he probably has plants for sale. (*Bot. Reg.*, May.)

Onagraceæ.

GODETIA Spach

rubicunda Lindl. Ruddy Godetia. A handsome hardy annual plant; growing about two feet high; with purple flowers; appearing in July and August; a native of California. Bot. Reg., 1856.

A very beautiful species of the primrose, now belonging to

Godétia, since this genus has been established by Mr. Spach. It is similar to *Godétia Lindleyana* (formerly *Ænothëra*), with the exception of the spots on the petals, which are wanting in the former; it forms a very agreeable contrast, planted side of it in the border. In some respects it is similar to *G. lépida*, mentioned in our last; but the flowers are twice as large, and the purple blotch on the petals is wanting. It is a fine hardy annual, discovered by Mr. Douglas in California, and sent to the garden of the London Horticultural Society, where it flowered for the first time in England in July and August last. (*Bot. Reg.*, May.)

Rosàcææ.

CRATÆGUS

orientalis *Lindl.* Oriental Hawthorn. An ornamental hardy shrub or tree; growing ten or fifteen feet in height; flowers white; appearing in May; propagated by grafting on the common hawthorn. *Bot. Reg.*, 1852.

Synonyme: *Mespilus orientalis* of Tournefort.

This is another of the beautiful species of hawthorns now being figured in the *Botanical Register*, in a fruiting state. It forms a "very handsome" tree, with snow-white flowers, and, in autumn, its leaves assume a rich purple tint. The fruit is quite large, and appears in clusters of from four to five in each, on the ends of the branches; they are of a deep red, inclining to a purple tint, and shiny surface. This species is stated to be the genuine oriental mespilus of Tournefort, and distinct from *C. odoratissima*, to which it has been referred, as well as from *C. tanacetifolia*. The habit of the tree is compact, and has the aspect of *C. odoratissima*. The drawing was made in the garden of the London Horticultural Society.

maroccana *De Candolle* Morocco Hawthorn. An ornamental, hardy small tree; growing from ten to fifteen feet high; a native of Barbary. *Bot. Reg.*, 1855.

A very pretty species, or variety, but not so attractive as the last. The leaves are glabrous, long petioled, trilobed, and trifid. The berries, which are of a very pale red or light scarlet, appear in rather dense clusters of four or five each. This species is said to be a native of Barbary, but it is uncertain; it grows, however, in Palestine, having been collected on Mount Sinai and St. Catherine by Mr. Bové in 1832.

Dr. Lindley states that it is not improbable that it is a mere variety of *heterophylla*, to which, in some respects, it approaches; but some little difference in the form and color of the fruit has warranted him in constituting it a species. The drawing was made from the London Horticultural Society garden. (*Bot. Reg.*, May.)

Euphorbiæææ.

Poinsettia pulcherrima *Graham* the *Euphorbia* *Poinsettia* of our gardens is stated, in Jamieson's *Journal* for April

(vol. xx. p. 412), to have been introduced to the Edinburgh Botanic Garden from Philadelphia, by Mr. James Macnab, in November, 1834, and flowered in the following year; subsequently it blossomed with Dr. Niell, at Cannonnills. "Nothing" it is stated, "can be more ornamental." It will probably soon be distributed throughout England. Dr. Graham states that there can be no doubt that it forms a distinct generic type, and he has "dedicated it, if not to its original discoverer, at least to one who has first brought it into cultivation, and into general notice among botanists, and through whose exertions many additions to our collection of plants from Mexico are expected." We are glad to perceive this honor bestowed on one whom we believe in every way deserving it.—(*Edin. New Phil. Journal*, April.)

MONOCOTYLEDONOUS PLANTS.

Iridæcæ.

Antholyza præalta, one of the species sent from the Cape of Good Hope, by the Baron VON LUDWIG, as mentioned at p. 137, to the Massachusetts Horticultural Society, and distributed among the members, has flowered in several gardens. It is similar to *A. æthiópica*, possessing no great beauty, and only desirable in a collection. The flowers are small and orange-colored. The flower-spike attains to the height of four or five feet. It is easily cultivated.

Orchidæcæ.

DENDROBIUM.

In *Paxton's Magazine of Botany* for May, a magnificent species is figured, under the name of *moniliforme*. It is described with ovate-lanceolate obtuse leaves: stem a foot high: flowers produced in pairs on a common footstalk or peduncle, springing mostly from the top of the stem: they are of a clear rose color, marked with crimson on various parts of the flower. It is a native of China and Japan, and was introduced a few years since into the garden of the London Horticultural Society. It is a very charming plant, requiring the same treatment as the other *Orchidæcæ*. In their native habitations the plants entwine themselves about the branches of living trees, where they flower in great perfection. One or two species of this family, from South America, have flowered in the collection at Hawthorn grove the past spring. We have not been able to ascertain their names.

ONCIDIUM

altissimum. Tallest *Oncidium*. A stove epiphyte; growing to a considerable height; flowers yellow and brown. Bot. Reg., 1851.

Synonyme: *Epidendrum altissimum Jacqin. Stirp. Amer. X. 141.*

This is the true *Oncidium altissimum*. Dr. Lindley states

that he long since suspected that two distinct species were confounded under the name of *O. altissimum*, and named one *O. Bauëri*. He afterwards considered it a variety, and so gave it in his genera and species of orchideous plants. In doing this he now thinks he was wrong, as the true *altissimum* has lately flowered in the superb collection of the Messrs. Loddiges, and it is impossible, from a comparison of the two species, to combine them as once proposed. Consequently, the *O. altissimum* figured at 165 of the *Botanical Register* is the true *Bauëri*, and not a variety. The plant is very graceful in its habit, with a long pendant spike of flowers, of a bright yellow and rich brown color. (*Bot. Reg.*, May.)

ZYGOPETALUM *Hooker* (So named from *Zygos*, yoke, and *petalon*, petal, to join; in allusion to the adhesion of the sedge-ments of the perianth, by their bases, in the original species.)
cochleare Lindl. Spoon-tipped *Zygopetalum*. A beautiful stove epiphyte; growing ten or twelve inches high; with white and blue flowers; appearing in August; a native of Trinidad. *Bot. Reg.*, 1857.

“Beautiful as all the species of *Zygopetalum* are, without exception, this is, perhaps, upon the whole, the most attractive, not only on account of the delicate waxy surface of the petals and sepals, and the peculiarly rich veining of the lapis lazuli blue of its lip, but because of its delicious fragrance. If lilies of the valley were growing intermingled with the plants, the air could not be more perfumed with their pure and delightful odor than it is after the curious flowers of the *Zygopetalum* have unfolded.” This fine description is sufficient to induce any cultivator of this elegant tribe to possess the plant; and, as it is easily grown, being a terrestrial species, we hope it will find its way into our collections of plants on this side of the Atlantic. The sepals, similar to those in some of the species of *cyripedium*, are white, as is also the base of the petals; but the edges of the latter and also the lip is exquisitely striped and veined with a rich blue tint. It is a native of Trinidad. The drawing was made from the collection of Mr. Knight of the King’s Road. (*Bot. Reg.*, May.)

Liliacæ.

ORNITHOGALUM (An ancient name, adopted by the Latins from the Greeks, evidently derived from *Ornis*, a bird, and *gala*, milk: but its application has proved a stumbling-block to most etymologists.)

chlorocœum Lindl. Green and White *Ornithogalum*. A green-house bulb; growing a foot or more in height; with greenish-white flowers; appearing in July; a native of Valparaiso. *Bot. Reg.*, 1853.

A pretty species, found in the vicinity of Valparaiso. The flowers are white, with a greenish tinge on every petal: the blossoms appear on peduncles of different length, and form a kind of spike. It is quite different from any of the previously described species. It may prove to be a hardy bulb. (*Bot. Reg.*, May.)

REVIEWS.

ART. I. *The Gardener's Magazine and Register of Rural and Domestic Improvement.* Conducted by J. C. Loudon, F. L. S., H. S., &c. In Monthly 8vo Numbers; 1s. 6d. each. No. LXXIV, for May.

THIS number is full of valuable information, from which we shall make large extracts. It contains twelve excellent original communications, from various scientific and practical men.

Art. 1.—“Gardening Notices suggested by a tour in France, in August and September, 1835.” By T. Rivers, Jr., the well-known nurseryman at Sawbridgeworth, at which place is one of the finest collections of roses in England. The article is full of interest, being amusingly as well as instructively written. The following extracts include the most useful parts of the paper.

“*Forcing the Rose.*—At Lisle, in one of the numerous small nursery gardens, I was interested with what might be called a most eligible mode of forcing the rose. In this instance a small span-roofed house was used. A border on each side of the central path was planted with roses budded on dog-rose stems of different heights; the shortest stems being put next the path, so as to make their heads form a sloping bank. The surface of these borders was covered with manure, to keep them in a constantly moist state. The common smoke flues were used for heating this house; and the owner informed me that, by beginning to force in December, roses were gathered from it plentifully for the market in March and April.

“After the crop of flowers was gathered, the lights were taken off in May, and the plants exposed till the period for forcing again arrived. This method appeared so simple and economical, that I took a memorandum merely for the purpose of suggesting it to your readers; and, for growing moss and other roses for bouquets near London, it might, I think, with some little modification, be carried extensively and profitably into practice. In this way, also, with but very little trouble, a rose garden in full bloom and luxuriance might be created as early as the end of February; and, by selecting some of the ever-blooming varieties, continued nearly through the whole year. And what a delightful sheltered promenade might thus be formed by those who, regardless of expense, would build an elegant span-roofed house, with movable lights, so as to form an agreeable resort, not only in early spring, but also at the end of summer and autumn! for in September and October, and even in November, the Noisette, China and perpetual roses, regardless of having been forced, would bloom again as luxuriantly as ever.”

The following is given as the “Mode of Cultivating Pear Trees in Pots, where the object is economy of space.”

“A Frenchman's town garden is often a model of economy of space. You will find a choice collection of roses, budded on short stems; a col-

lection of valuable rhododendrons, azaleas, and camellias, in pots ; and, perhaps, thirty or forty varieties of pears, all growing in so small a space, that an English gardener can scarcely believe what he sees. In the garden of M. Smedt, a distinguished amateur at Lisle, the pear trees were literally pyramids of fruit. The summer foreright shoots were tied in so as not to shade the pears, and the following winter they were removed. I suspect, also, that the roots of the trees were annually shortened, to reduce the luxuriant growth which pear trees are so liable to ; but this I could not ascertain. The soil was a loose black sand, and the trees models of productiveness. Many of their stems, being too weak to support the weight of fruit, were tied to green painted stakes. Much of this extraordinary fruitfulness in such confined limits was owing, no doubt, to a more genial climate than we have here ; as the summers and autumns are warmer, and the wood is always well ripened : but many of the best Flemish pears might be grown in our town gardens with quite as much economy of space as in France, if any regard were paid to culture. This culture is simply to keep them from growing too fast, by confining or reducing their roots ; blossom buds will then be formed in abundance. It seems almost impossible to kill a pear tree : for, though I have opened a circular trench round a pear tree, and cut off every root to within fifteen inches from the stem, yet it has not suffered, but, the following season, has been covered with blossom. In some of our rich London gardens, cutting the roots annually would have little or no effect ; but I think that, if pots were manufactured expressly for the purpose, of large dimensions, we will say two feet deep, and one and a half foot in diameter, and plunged to the rim, not deeper, a collection of the new Flemish pears might be grown in any small garden. I mention, particularly, that the rim of the pot ought to be above ground, on account of the lateral roots, which would otherwise make their way over it, and give the luxuriance which it is so necessary to check in order to get fine fruit. To keep the trees under control in this respect seems to be the grand object of pear tree culture ; and I feel assured that this may be attained by growing the trees in pots, by keeping the surface well supplied with manure, and, in summer, by watering with liquid manure. I hope ere long to see as many amateurs of pears as there now are of dahlias and roses ; and, in all the principal nurseries, specimen plants of every variety in cultivation, growing and bearing abundantly in plunged pots. One precaution must be strictly urged. Every gardener is aware of the tendency of the pear tree to make what is called a taproot. This the plants in pots will most assuredly do, if not checked, through the hole in the bottom. I therefore recommend that, in November or December annually, a trench be dug by the side of the pot, which must then be turned on one side, and every vestige of a root which may appear through the hole cut off with a spade. In the course of a few years a bunch of fibrous roots will be formed, that will require no other trouble than being annually disturbed ; that is, the pot turned completely on one side, to prevent their giving too much luxuriance to the tree, by spreading into large feeders."

At Versailles are numerous small nurserymen, who principally grow plants for the flower-markets of Paris. Grapes are ripe there in the open border by Sept. 6. *Magnolia tripetala* was ripening seeds at the same date. Hundreds of yellow China roses, budded on short stems, were covered with flowers. What a splendid sight ! The principal plants grown are *Kalmia latifolia*.

folia, and glauca, azaleas, rhododendrons, &c. ; but it is stated they are not sold so cheap as in England.

In the *Jardin des Plantes*, at Paris, *Maclura aurantiaca* was bearing fruit. The original plant of *Æsculus rubicunda*, raised there by Michaux, in 1812, is now a fine specimen. Two new iron palm-houses were [1835] being erected, which, it is supposed, will surpass any thing of the kind ever yet built ; they are the boast of the Parisians. Iron curtains are attached to most of the green-houses in France, to protect them from hailstorms, which are very prevalent on the continent, as will be seen in another page of the present number.

The following remarks allude to the purple laburnum, of which much has been said in England, and much imposition, we believe, carried on in the sale of the plants.

“The purple laburnum, of which so much has been said lately, was growing here in great perfection. It came accidentally from seed among some common laburnums, in 1828, in the nursery of M. Adam, whence its name of *Cytisus Adamii* in some catalogues. A fine plant was shown me by M. Camuset, which appeared to be half *Cytisus purpureus*, and the remainder purple laburnum. On examination, the curious fact was ascertained, that the purple laburnum, which is evidently a hybrid between *C. purpureus* and *C. Laburnum*, had partially returned to the habits of one of its parents, the *C. purpureus*. This is surely a most unusual occurrence. Here was no trickery of grafting practised ; for I saw nearly a similar effect produced, in Jan. of the present year (1836), on a tree which I had sent to the Hon. C. Herbert of Ickleton, Cambridgeshire, in 1834, which presented precisely the same appearance. At the extreme end of one of its shoots there came forth a branch of the pure *Cytisus purpureus*, with its small leaves and peculiar habit, appearing as if budded on the purple laburnum. Have you, in your long experience, ever seen any fact approaching to this, viz. of a tree returning from hybridisation to the state of one of its parents ?”

Among the French gardeners, the practice is adopted of surface manuring the soil, and, more particularly, roses : the importance of this system may be seen from the following observations :—

“During this last dry summer, when they constantly required water, without this, the surface of the ground would have been regularly baked and impervious ; with it, the water poured down did not rapidly evaporate, but carried to the fibres a constant supply of nutriment from the mature. What an excellent hint does this give to planters on poor, stony, sandy, or chalky districts in this country ! On such soils all the manure should be put on the surface, and left for the worms and the rain to force it in. In the private garden attached to the Luxembourg Palace, and open to members of the French Chambers only, are some of the finest rose trees in the world, apparently of great age (I regret not ascertaining this more correctly), and in vigorous health. Many of the stems of the standard roses in this garden are as thick as a stout man's leg. They are not budded on tall stems, their average height being, perhaps, from four to five feet ; and they support themselves without stakes. Though so old and so large, they have regular annual

culture, their heads being pruned every season, and the surface of the ground constantly manured. In this we have yet much to learn from our neighbors. With us the general mode is to plant a tree, and leave its after-growth to chance. Of course I now allude to amateurs and those gentlemen who amuse themselves by being their own gardeners; and, perhaps, this hint may induce them to give all their trees and shrubs some little annual notice."

We have frequently heard it stated, by many of our amateur gardeners, that tree roses are of very short duration in our climate; that from some causes they suddenly died off before the cultivator was even aware that they were in an unhealthy state. These causes have been by some attributed to the effect of climate—by others to their cultivation—and by many to improper stocks, on which they are budded. We have not had sufficient experience to allow us to offer any information on the subject; but so far as we have grown the tree roses, we have found them to flourish equally well with the dwarfs. The severity of the last winter, which, as almost every one knows, was unprecedented for its duration, as well as for its intensity of cold, left unharmed some dozen or more of tree roses, among which were two or three hybrids that were fully exposed to the weather. The ends of the shoots were killed more or less, as were also the dwarf ones, but they grew as well and flowered as freely as ever we have seen them. We are rather inclined to the opinion of the author of this paper, that it is more from neglect than from any effect of climate or soil. It is too often the case that after a plant is set out, whether it be a fruit tree, a vine, or a shrub, nothing more is thought of it, unless it be the thought of wonder and astonishment that it should not flourish and bloom as well as those under the care of the experienced cultivator. It is impossible to expect plants to grow of themselves; they need care and attention, and, unless they have it, they must not be expected to repay the cultivator by either brilliant blossoms or vigorous growth. We do not hesitate to say, that tree roses will live to as great an age and blossom as finely in our climate, as those mentioned in the above extract.

Numerous beds of seedling China roses (*Rosa indica*), and the tea-scented China roses (*R. indica odorata*), were in full luxuriance of bloom on Sept. 10th, which was attributed to the superiority of the climate. Those little petty jealousies which are too common among our gardeners, it will be observed, by the following extract, tend to have no good effect upon the advancement of horticulture or floriculture:—

"Some most superb varieties were among them; but M. Hardy is rather chary of his roses, and does not like them to be distributed hastily, patronising the old fashioned idea of possessing what his neighbors have not. It is amusing to find very prevalent here the little jealousies and envyings that at one time were so common among our florists. If a rose that has been raised from seed by M. Hardy is praised

in the presence of another celebrated amateur near Paris, it is always responded to with "Bah !" and a shrug of contempt. Reverse this, by praising the amateur's rose to another, and you will find the same effect produced. It is therefore most prudent, if you wish to remain in the sunshine of favor, to limit all your admiration to the roses present, forgetting that there are any other roses or rose amateurs in the world.

"Among the seedling roses in this garden were some most curious hybrids, between *Rosa* or *Lôwea berberifolia* and other roses : they had not yet bloomed, but really looked very interesting, owing to their peculiar habit. A custom in France among rose-growers gives rise to many (to us) very uninteresting names. An amateur who raises roses from seed is regularly besieged by his lady friends to name one after them. He therefore keeps a book in which applications are duly registered, and this is only deviated from under very peculiar circumstances ; hence we have Madame Desprez, Madame Hardy, &c. I often think that some of the fair applicants have not been in high favor when I find very bad roses honored with their names, which are soon consigned to oblivion. On the contrary, if you find a cultivator names one after his wife, it is generally a very fine flower, as is the case with those above mentioned. I think this is generally a very safe criterion for judging of the goodness of the flower, merely by the name ; for, if the unfortunate grower has a termagant wife, I am quite sure (from the active part French women take in business) that she would not allow her name to be attached to a bad rose ; and, if an affectionate partner, his feelings will prompt him to honor her name with a fine flower."

The Paris Nurseries.—The nursery business in Paris seems to be at a low ebb ; the writer states that there is not a respectable one in the vicinity. That of Cels is much reduced. Noi-sette has retired. Fion's nursery is in good taste, but very small. It is said that new and rare plants are not patronized, and only flowers and flowering plants for the market are worth cultivating. This depression of the nursery business the writer attributes partly to the following cause :—

"Another cause for the slovenly and bad state of the French nurseries is, that the instant, by plodding, the proprietor accumulates eight or ten thousand francs, he considers himself a man of fortune ; and, instead of investing it in improvements in business, as we do, he lives on the interest, and feels proud in being called a gentleman : for, however respectable we think a man in large business, the French do not ; but consider an idle man of thirty pounds per annum as much his superior. I have found this from experience ; as an amateur, you may command any thing : but if you avow yourself *un commercant*, ten to one but the tone is changed. When an Englishman is told the amount of property that some of these "men of fortune" possess, it is impossible to repress a smile at the extraordinary smallness of the sum which contents them : but then *soupe aux choux* (cabbage soup without meat) five days out of seven is cheap living, and coffee is also cheap ; and these are all a Frenchman cares about *at home* ; though, if you take him to a restaurateur's, and *treat* him with a good dinner, it is amazing how he will enjoy the good things of this life."

This is a true trait in the French character.

"*Commercial Rose Nurseries in Paris.*—Nothing can be more insignificant, both as to size and stock, than the nurseries of the commercial rose-growers near Paris ; they seldom exceed one acre, and more fre-

quently contain but half that quantity of ground; in which standard roses of all heights, and dwarfs of all sorts, are grown in the same rows; presenting, to a stranger, an inextricable mass of confusion. It would be difficult to execute an order for a general good collection from any one of these nurseries; but they are so numerous, that twenty may be visited, for twenty sorts of roses, with but little difficulty. I had concluded that M. Laffay, and one or two others, whom I knew to have been in our English nurseries, would have adopted, in some degree, our orderly arrangement; but they had not in the least deviated from the custom of their neighbors; and M. Laffay's little garden, of half or three quarters of an acre, was as full of roses and confusion as any that I saw."

With the Cemetery of Père la Chaise the author was not very well pleased; too many evergreens are planted about the graves, forming a dreary and gloomy mass. The cypress and the weeping willow, the two most appropriate trees for planting in such situations, are rarely seen. The same may be said of the Cemetery at Mount Auburn; we have been surprised to see so few cypresses and weeping willows planted, while masses of arbor vitæ and balsam firs are scattered in profusion around many of the graves. We hope the proprietors of lots will give some attention to this, and plant more flowers and fewer trees, and those appropriate to the scene.

From the higher parts of Père la Chaise the view of Paris is said to be most beautiful. The following remarks in regard to this place we commend to the attention of every person interested in the cemetery of our vicinity; they are applicable in every instance:—

"How much it is to be regretted that a finish is not given to this interesting place by removing and thinning the overgrown and crowded trees, and planting others more appropriate; filling up the hollow paths, and giving some of them a fresh direction! In short, it ought to be under the management of a committee of taste, rather than left to individual caprice."

How delightful and pleasing a view of the city and environs of Boston might be opened, by cutting away some of the trees and brushwood which surround the highest part of Mount Auburn, and from where nothing can now be seen but the blue sky above. In the foreground might be traced the gentle curvings of Charles River, beyond and to the left of which, Cambridge, with its colleges and retired residences, and, farther still, the distant city. On one side would be seen the rich scenery of the highly cultivated and fertile village of Watertown, with its noble sheet of water, and, on another, the adjacent towns of Brighton and Newton, with their quiet villas and picturesque landscape. Indeed, we know of no spot where the surrounding country could be viewed with more advantage—no place where the many strangers who resort there during the summer season could gather a more favorable opinion of the varied scenery and highly cultiva-

ted character of the vicinity than on this spot. We have long hoped that this rare opportunity would not have escaped the observation of the proprietors of this interesting place—and we look anxiously forward to see it carried into effect.

The second article is by our well known and practical agriculturist, Judge Buel, “on the Excretory functions of Plants.”

The third article is a continuation of designs for laying out suburban gardens, with wood-cuts.

Art. 4 contains some account of the “Indigenous and Exotic Trees of Switzerland.”

The total number of ligneous species of trees in Switzerland is two hundred and eighteen, of which fifty-five rarely exceed the height of two feet; one hundred and one are shrubs, varying from two to ten feet; twenty-four are shrubs and low trees, not exceeding twenty-five feet in height, and thirty-eight are trees which surpass twenty-five feet. The best vineyards of Switzerland, as to quality, are those of Valais and Tessin. Those of the Canton de Vaud furnish a fine wine and bear enormous crops, in consequence of the manure which is lavished upon the lands.

Articles 5 and 6 are not of much interest to our readers.

The seventh details a method of grafting rhododendrons, particularly that magnificent species the *álta-clerénse*. We give the writer's own words:—

“Having been successful in propagating *Rhododéndron álta-clerénse* in a way that I have not before seen practised, I make it known to you, hoping that my doing so may induce others to practise it; and trusting it may be the means of making this scarce species of this beautiful genus of plants more abundant. Calling at Chatsworth last spring, I observed that they had a fine plant of it beautifully in bloom; and I begged the favor of Mr. Paxton to allow me to take a small sprig, which he kindly permitted me to do. I then inserted the end of the sprig into a potato, and brought it home with me a distance of eight or nine miles. Happening to have a small plant of *Rhododéndron pónticum* in a pot, I cut it down to about five inches above the pot, and grafted it in the whip manner with the small sprig thus procured, letting the end still remain inserted in the potato. I then clayed it, and put it under a hand-glass in a cool vinery, where it united to the stock, and is now a healthy plant, standing out under a south wall.”

Articles 8, 9 and 10 are all valuable, but we have room only for one or two extracts from the 8th, upon the preparation of grape borders to graperies or green-houses, and the pruning of the vines. The author of this paper (entitled an Essay upon the Cultivation of the Vine under Glass), gained the first prize at the St. Andrews Horticultural meeting in September, 1835.

“I now come to the preparation of the border. The situation, if not naturally dry, must, of course, be rendered so by draining. The best bottom, in my opinion, is one formed of large flat stones, got from the top of a lime rock, which is of a nature that would assist the growth of

the vines when they reached it. The border ought not to be deeper than from two to three feet; as, if it is more, the roots of the vines will get away from the action of the summer weather, and the good of the manure that may be put on the surface. Instead of having the border almost composed of a stiff clay, as is often the case, I would have it formed of decomposed turf and good black earth, with a sufficient quantity of decomposed cow-dung, vegetable mould, and cold [slaked] lime, well mixed by frequently turning it, and which should be allowed to lie for two years if convenient. Having the border filled in and subsided, I would plant the vines in rather poor soil, as the roots will run farther in such soil, the first year, than in a strong rich soil. I would have good strong plants planted close to the wall on the outside, and introduced through holes made in the building, from four to six inches in diameter, projecting upwards towards the inside, and proceeding from a few inches above the surface of the border on the outside.

"I would not plant more than one plant for every two sashes in the house, as the less the roots are interwoven with one another the better; and there is no difficulty in filling any house in this way. I would train up only two shoots the first year, keeping the sashes of the house on all the first season, until all the leaves have fallen off; at which time I would cut down both shoots to three buds. The second season I would put on the sashes on the first of March, giving plenty of air through the day, and shutting up at night. It will be observed that I have allowed three buds to remain on each shoot of last year's growth, which will produce three for every sash this year, which I would train up to their full length. There should be a little fire put on this season, about the latter end of August, at night, or when the nights turn cold; and this fire should be continued until every leaf falls off. The third season I would allow the shoot in the middle of the sash to remain, nearly to the top of the house, cutting down the other two to two buds, or eyes, which will produce two shoots on each side of the fruiting one, and which are to be trained up to their full length. The house may be shut up about the 1st of March, and the fire lighted about the middle of that month, the heat being raised gradually to 75°, at which it may be kept until the fruit is ripe; when it should be allowed to fall off by degrees, but not entirely discontinued until the whole of the leaves have fallen off.

"I now come to the winter pruning for the fourth season. It will be observed, that I had one fruiting shoot and four young shoots for every sash last year: the old one I would allow to remain, with spurs of three buds, and one of the young shoots on each side of it, nearly to the top of the house; the other two I cut down to two buds, which will produce two young shoots on each side of the three fruiting ones, to be trained up to their full length. If the vines have been all along treated as above, they will now be very strong, and will be able to stand forcing nearly a month earlier, if required; and, also, more heat than when they were younger: indeed, I consider that vines, after they have attained to the age of standing forcing, should have much more heat than is commonly given to them.

"I will now describe my method of winter pruning for the fifth year, which will show how I would continue it. It will be observed that I had three fruiting shoots, and four young ones, for every sash last year; the spurred one I cut away altogether, and spur the two which had only fruited one year, with two of the young shoots, which will leave two for cutting down, to produce four young shoots again. Now it will be seen that I have always two spurred shoots, and two young shoots fruiting, and two to cut down; which is not only a regular method of pruning, but one which will keep the vines in a far more

growing state, than the common methods of having so much old wood upon them. It will be seen by this regular method of winter pruning, that the summer pruning can be done in much less time, which is also an advantage, by my method of performing; which is, to pinch off all the laterals which may appear below the fruit, and one bud above it; continuing to pinch off all above the next bud, as the plants grow, for the whole season. With regard to the number of bunches which I would allow to grow on each fruiting spur, it should be all that set well, as the vines will be able to bring to maturity almost all the fruit they show, if treated in the manner I have endeavored to describe."

Article 11 is a plan for growing Potatoes and Dahlias on the same ground and in the same season. We believe this system is pursued by some of the florists in Philadelphia; at least, we have been so informed. We have no doubt it will answer well; and to some persons who wish to combine the useful and ornamental, and who have but a limited piece of ground, it may prove an excellent mode.

"In the autumn, when the leaves have nearly all fallen from the trees and shrubs, and the seedling weeds are near coming to seed, I fork over all the spare ground where crops have been growing, which leaves it in a neat state during the winter. In February I plant my potatoes (the early Shaws), which I generally put into the ground whole; but, if the potato is large, I divide it by drawing the knife through the middle of the cluster of eyes at the end of the potato. I begin planting the large beds, having the first row a convenient distance from the edge; after setting down the line, I dig a trench without treading upon the spade, and, as I come back, clean out the trench to about four inches deep. I put in the sets, then remove the line three feet or three feet and a half, and dig another trench in the same manner, having a wooden rake by me to pull in the earth over the sets, and rake the ground even as the work of planting goes on. I next remove the line two feet, and dig another trench, which leaves but sufficient space for the moulding up of the potatoes. I next remove the line three or three and a half feet, and so on. As soon as the potatoes are grown a sufficient height to be seen, I fork the ground one fork wide on each side of the row, by thrusting in the fork and pressing it down, so as to raise the earth, and thus leave it, not to throw it out. When the plants are sufficiently high, I mould them up, observing to mould them highest on the wide side, so as to give the stalks an inclination to fall between the narrow rows, where they are to be kept, so that one side of each row may have the full benefit of light and air. About the middle of May, I put on between the wide rows a slight coat of dung, and dig it in close to the moulding of the potatoes. By this plan the potatoes do not get at the dung, until they are in a fit state to bear it without injuring their flavor. I plant the dahlias five feet asunder between the wide rows of potatoes, placing a stake about two feet high to each plant, for the purpose of supporting it, and marking the place where a taller stake is afterwards to be placed. In July and August the potatoes are taken up, and the ground cleared. If the weather should be dry, and the dahlias likely to require water, I then make basins round the plants before levelling the soil. Since I have adopted this plan, I have had a more abundant crop of potatoes, and of better flavor; and, instead of the ground appearing as if lying waste after they are gathered, I have something to look at. As my garden rises on each side from the centre walk, I can assure you the dahlias, when the colors are well mixed, make a very pretty appearance."

ART. II. *Paxton's Horticultural Register.* Edited by J. MAIN, A. L. S. In Monthly 8vo Numbers. 2s. each. No. XLVIII, for June, 1836.

THE cultivation of water-cresses is now becoming very general, by market gardeners, for supplying this fine vegetable. In the hope that the following article may render their growth more simple, we extract it entire from this work.

"The sanatory virtues ascribed to this vegetable have long made it valued as a salad plant. Being found wild in every streamlet in what is often called the old world, the necessity of cultivating it in England did not occur to any one, until a person residing near Rickmersworth, in Buckinghamshire (and who used to employ poor people to pick these cresses from the river Colne), could not at last supply the demand for the London market, more especially as he had no more right to the cresses in the river than any one else in the neighborhood. But the idea of their cultivation occurring to him, and having the offer of the tenancy of a large branch of the river which bounded his own vegetable garden, he eagerly embraced the offer, and, in a most spirited manner, commenced the culture of the plant, on what he could call his own premises, and with the most successful and profitable result.

"The great success attending this new branch of vegetable culture attracted the notice of the Horticultural Society of London, and, on application, he supplied the society with a detailed account of his proceedings and success; and for which the members of the society voted him a medal, or some other valuable mark of their approbation. Since that time numerous other cress plantations have been made in different parts of the kingdom, and it really appears that the demand about London is fully equal to the supply, thousands getting their bread by hawking cresses about the streets; and, from the quantities daily disposed of, a stranger to London might naturally suppose water-cresses to be, in that city, a necessary of life.

"The place chosen by the first cultivator was a very shallow and wide branch, or rather a tributary from springs to the river, where the water ran rapidly over a clean pebbly bed, and in depth from one to two or three inches. It is necessary that the pebbly bed have a uniform and regularly graduated fall, as this is conducive to the growth, cleanliness, and facility of picking the cresses. In planting, for the first time, such a part of a stream, plants are brought from where they grow naturally, with a little of the mud adhering to them, and beginning at the bottom of the pebbly bed, arranging the plants one above another in longitudinal stripes, or narrow beds, with open spaces of a foot wide between, to allow a free passage to the water, and paths for the pickers to tread in. Thus placed, the plants soon take root in the gravel, and are in no risk of being floated away.

"If the plantation be subject to be deeply flooded by sudden thaws of snow in winter, or heavy rains at other seasons, the owner should have some contrivance like a dam or barrier at the top, to turn the flood aside.

"Any quick-flowing rivulet is suitable for growing water-cresses; but spring water fresh from the fountain-head is by far the best, not only from the heat of spring water inducing more rapid growth, but because the growth is continued throughout the winter, and is therefore more profitable in that season when the produce is most valued. The

success of the first cultivator depended very much on his supplies of spring water issuing from under the chalk formation in that neighborhood. But his industry and skill contributed greatly to make the business a profitable speculation.

"A plant of this kind is cultivated in India, in rather an expensive manner. It is called water-cress by the English residents, but whether it be the *Nasturtium officinale*, English water-cress, the writer is uncertain, as the plants were only very small seedlings when seen. The plants are cultivated in the following manner :—A trench of any length and about four feet wide is made in the ground about two feet deep. Into this water and the finest of the earth is thrown and mixed together, forming thin puddle, till it is nearly as high as the edges of the trench. Over the whole length and width of the trench a shed or hovel is raised, and thickly thatched with cocoa-tree leaves, but open on the side and ends. The hovel finished, young plants are stuck in pretty thickly all over the surface of the puddle, and as much water let on as just allows the leaves to float. As this is quickly exhaled away, more is from time to time added, to keep the surface always moist. In this shaded situation the plants grow quickly, and soon come into use as a most acceptable salad herb in that warm climate. It is only gentlemen of fortune, however, who can treat themselves with such a luxury.

"The anti-scorbutic powers of the water-cress constitute its principal value as a condiment to food; and as the plant grows plentifully in a deep dell under a natural cascade in the Island of St. Helena, the crews of ships touching at that island are sent on shore, for the purpose of having a feast of this pleasant medicinal plant.

"It but seldom happens that it is necessary to cultivate water-cresses for private use; because, wherever there is a stream of water, there the plant is spontaneously found, and where there is no stream they cannot be introduced. Stagnant pools are unsuitable; for though the plant will grow, they are neither so clean nor so palatable. For the supply of cities or large towns, however, wherever a branch of a river can be appropriated to the purpose, or even where a constantly wet part of a meadow could be formed into a shallow channel for the growth of water-cresses, the space so occupied would be, without doubt, as profitable as any other portion of the land."

ART. III. *Literary Notices.*

The Suburban Gardener, by J. C. Loudon, Esq., F. L. S. &c., is to appear in December next. Illustrated by numerous engravings on wood. The whole intended as a complete gardening book for such as are not professed gardeners. It is to contain as follows :—

1. Directions for choosing a House and Garden in a town or its suburbs, with some Plans for Street Houses, and Suburban Cottages and Villas. 2. Designs for laying out Small Gardens,

Cottage, and Villa Grounds, of from one perch to ten acres or more in extent ; including plans of some of the more interesting small gardens in the suburbs of London, Edinburgh, Dublin, Paris, Berlin, Munich, and Vienna. 3. Directions for their Planting, Culture, and General Management. 4. Directions for the Cultivation of all the Culinary Plants, Fruits, Flowers, Shrubs, and Trees usually grown in small Gardens. 5. Directions for Building and Furnishing small Green-houses, Pits, and Frames; for the Culture of such Plants as are usually grown in them in small Gardens, and for the Management of Plants in Pots, in Balconies, on House-tops, and in Rooms. 6. A Monthly Calendar of Work to be done, including Directions respecting Poultry, Pigs, Cows, Grass Fields, &c. 7. A priced List of the Trees, Shrubs, Plants, Tools, &c., usually required for small Gardens.

Geraniaceæ.—A new work on the geranium tribe was to appear on May 1st, in 4to numbers, on the first day of every alternate month, price 7s. The flowers will be painted in oil, by the first artists in flower-paintings, from which the engravings will be taken, and colored to imitate the originals. In the execution of the flowers it has been attempted to surpass any works that have preceded it, so that any individual flower might form a copy, that ladies fond of flower-painting might use, preparatory to their painting from nature. It will be published by the Messrs. Ridgeway.

Zur Geschichte, Kultur, und Klassifikation der Georginen und Dahlien.—This is the German title of a work now publishing in 8vo numbers, in Leipsic, at one dollar each. It may be translated as the History, Classification, and Culture of the Dahlia.

Flora Hibernica was preparing for publication about the middle of April. Part I, comprising the Flowering Plants and the Ferns of Ireland, by J. T. Mackay, M. R. I. A., A. L. S., &c. ; and Part II, comprising the *Musci*, *Hepaticæ*, and *Lichènes*, by Thomas Taylor, M. D., M. R. I. A.; and the *Algæ*, by W. H. Harvey. In one royal 8vo volume of about six hundred pages.

The Flora Domestica, or History of Medicinal Plants indigenous to Great Britain, illustrated by numerous colored plates, by Benjamin H. Barton, F. L. S., will be published in parts. Part I was to appear on May 2. The work will contain a correct description of all the medicinal plants growing wild in the woods and fields of Great Britain, and such as are cultivated and easy of access in the gardens. The history of each plant will comprise its botanical and popular character ; its poisonous qualities, if any ; the uses to which it has been applied in medicine, the arts, and in rural and domestic economy ; the mode

of appropriating its active principle, with the proper directions, &c.

The Floricultural Magazine and Miscellany of Gardening.—Conducted by Robert Marnock, Curator of the Botanical and Horticultural Garden, Sheffield. This is the title of a new periodical work, No. I of which was to appear on June 1st. Each number will contain a colored plate, and will comprise original communications and inquiries; editorial observations and answers; notices of new flowers, or novel modes of cultivation; reviews of books, selections from interesting works, current and other notices, &c. Mr. Marnock is well known as an intelligent and experienced cultivator, and fully able to do justice to such a work. Each number will contain twenty-four 8vo pages, at 6d. each.

MISCELLANEOUS INTELLIGENCE.

ART. I. *General Notices.*

Method of preserving Plants during a long Voyage.—The following letter was communicated to Messrs. G. C. and R. W. Fox and Co. by Capt. R. Gillies, of the ship *Hibernia* :—

In accordance with your wishes, I have much pleasure in describing to you the mode in which the plants brought by me from Calcutta were put up. The plants were all intended for the green-house in England, and, I presume, were of a delicate kind. Each plant was in a box, six inches square by one foot in depth, filled to the top with a kind of clay; and, no doubt, well saturated with water, previously to being put into the large outer box, which contained eight of these small ones.

The large box was constructed in the usual way; that is, a glazed roof about two feet high, the glass strong enough to resist the fall of a small rope, or other light body. It was hermetically closed with the common *Chunam* (a sort of lime, used in India as a cement for plastering houses, &c.) of the country, and was never opened during a voyage of five months. When we arrived in England the plants were all in beautiful health, and had grown to the full height of the case, the leaves pressing against the glass.

In dry weather, I always observed moisture within the glass, which was caused, no doubt, by the evaporation of the earth, and was again absorbed by the plants.

It is difficult to account for the perfect health of the plants, without the full admission of the atmosphere; but oxygen sufficient was probably admitted, either through the pores of the wood, or otherwise. It is, however, a fact, that no water was given to them during the voyage, and that they were landed in excellent order.—*Robert Gillies. Hibernia, Falmouth Harbor, October 2, 1835. (The Third Annual Report*

of the Royal Cornwall Polytechnic Society, Falmouth, 1835. 8vo. 2s. 6d.—*Gard. Mag.*)

The House Fly.—At the Entomological Society, on Monday, a paper by Lieut. Col. Sykes was read, on excluding the house-fly. The mode adopted was a net made of different-colored meshes, of about three quarters of an inch square, and which, when placed against a window, was found quite effectual in excluding the visits of these troublesome insects from the outside of the room. The same experiment was tried with meshes made of the finest black thread, one and a quarter inch square, which proved to be equally effectual. The approach of wasps was also prevented by the above mode, very few finding their way within the boundary. This was accounted for by an optical illusion in the eyes of the insect, of the highly magnifying power of vision, and the small focal length.

Now that netting can be procured at the low price of 2*l.* 1*s.* 3*d.* for thirty-three square yards, gardeners might try whether, by covering a hot-house with such a net, they could not exclude both birds and wasps. They might also apply it over standard cherry trees, and over various kinds of newly sown seeds; and, lastly, they might place it before the windows of their own cottages, to exclude the common house fly.—(*Ib.*)

Water-proof Strands of Bast, for tying Trees, and Water-proof Bast Mats.—In our Second Volume, p. 192, a mode of rendering ties of bast water-proof is mentioned by Dr. Van Mons; and, while recommending a trial of metallic ties, it is but fair that we should remind our readers of this very simple mode of increasing the durability of bast. To make bast ties water-proof, it is only necessary to wet them first with a solution of soap, and next with a solution of alum. A neutral compound is formed from the soap and the alum, joined to the albumen of the wood of which the bast is composed, which is insoluble in water. It has often occurred to us, that, if common matting could be woven in Russia, with the weft of pack-thread, and the woof of strands of bast, mats would then throw off the rain nearly as well as canvass; and the whole might be tanned, or rendered water-proof by Dr. Van Mons's process. Perhaps our friend at Cronstadt might be able to induce some of the Russian mat manufacturers to try this process.—(*Ib.*)

Chenopodium Quinou.—This plant is cultivated in the warmer parts of North America, and extensively in Chili and Peru, its leaves being eaten as spinach or sorrel, and its seeds as rice. It is also used in the preparation of a kind of beer. Dombey, on his return from Peru, endeavored to introduce the plant as a culinary vegetable into France, but without success. From a dried specimen of the plant grown in England last year, and exhibited at a meeting of the Linnean Society, by A. B. Lambert, Esq., V. P. L. S., it appeared, in habit, very like the strong-growing British *chenopodiums*, but we should think the seeds are far too small to be ever equal in value to any of our cereals; and certainly inferior to the white beet as a substitute for spinach.—(*Paxton's Mag.*)

ART. II. Foreign Notices.

ENGLAND.

Camellia Show at the London Horticultural Society's Garden.—*Exhibited for Prizes.* Chinese camellias: *Camellia japonica* striped, C.

j. fimbriata, *C. j. imbricata*, from Mr. Chandler. *C. j. double-striped*, *C. j. fimbriata*, and *C. j. althææflora*, from Mr. G. Glenny. English seedling camellias in pots, from Mr. Chandler. Baskets of cut flowers of Chinese camellias, from Mr. W. Wells, Mr. Chandler, and Mr. Donald—the latter of which were produced in the open air; and of English seedling camellias, from Mr. Alhnutt, Mr. G. Glenny, and Mr. Chandler.

Extras. *Camellia japonica* double white, *C. j. Chandleri*, *C. j. concinna*, *C. j. althææflora*, from Mr. Chandler; seven seedling camellias, from Mr. Alhnutt; baskets of camellias, from J. C. Palmer, Esq., and W. Wells, Esq.

A large silver medal to Mr. Chandler, for the best three Chinese camellias, in pots. A large silver medal to Mr. Chandler, for the best three English seedling camellias in pots. A silver Banksian medal to Mr. Wells, for the best basket of cut flowers of camellias. A silver Banksian medal to Mr. Chandler, for the best basket of cut flowers from English seedling camellias.—(*Gard. Mag.*)

Metropolitan Society of Florists and Amateurs.—The following were the subjects exhibited for prizes at their last meeting, viz. the best six plants of *Orchideæ*, the best six stove plants not orchideæ; and similar numbers of heath, geraniums, other green-house plants, calceolarias, hardy American plants, hardy rhododendrons, hardy azaleas; the best twelve hardy and half-hardy dissimilar varieties of heart's-ease; the best one hundred do.; the best twelve tulips; the best single specimen plants; and the best thirty-six varieties of cut flowers. We insert the above to show our distant or future readers what the rage now is for flowers and flowering plants.—(*Paxton's Mag.*)

BELGIUM.

Louvain, Dec., 1835.—We have had in succession two winters without frost, and two summers *without rain*. Thirty storms have each summer threatened to burst upon us, but, every time, their explosions have been prevented by the electrical conductors (*paratonneres*). At length the storms have gathered in regions so high, as to be beyond the control and influence of these conductors, and have burst forth, sending to the earth masses of huge hail-stones. Before the introduction of the metallic rods, we had, in summer, at every change of the moon, a storm in a low region of the atmosphere, attended with an abundance of soft warm rain; these rains are no longer known.

* * * * *

Our University has been suppressed by a decree of the Representatives; a free Catholic University is established in its place. I am sent to Ghent, twenty-five leagues from here, where the University is preserved. The gardens belonging to the house which I inhabit will share the fate of my great nursery,—they will be exterminated.

* * * * *

If, in the verification of what are left me, I find that in pears of the first rank (I do not speak of apples and other fruits), my losses do not exceed from eight hundred to one thousand varieties, I shall esteem myself truly happy. I am driven anew from two of my gardens; from that belonging to my habitation, and from a very large one, in which, at the destruction of my nursery, I found a refuge for most of the things that I was able to save. The first, with my dwelling, has fallen to the share of the University (Catholic), which has taken the place of ours. The other belonged to a suppressed convent, which has just been sold to a cloth manufacturer. I am myself expelled, and have

been obliged to seek an abode where I could, for refuge for my furniture, my papers and my person, and in the embarrassment of a removal from a palace to a house of limited dimensions. I am still Professor at Ghent.—(*Letters of Dr. Van Mons, of Louvain, to Messrs. Manning, Dearborn, and Kenrick, published in the Hort. Reg.*) Dr. Van Mons is now completing his *Pomonomie Belge*: there is to be a third volume, on account of the length of the *Catalogue raisonné* of his Culture of Louvain, which is to be annexed to it. This catalogue is to contain full information on all the fruits that have been raised by Dr. Van Mons, and many of which have been sent to Mr. Manning, numbered, but not named.—*Conds.*

GERMANY.

Notes on the Trees, Gardens, Gardeners, Garden Artists, and Garden Authors of Germany.—The oldest palms are in Vienna and Dresden. The *Corypha umbraculifera* has a head with an enormous circumference. One in Schonbrunn is nearly as large. There are here, also, *Chamaerops humilis*, *Zamia*, and *Eutérpe pisifórmis*, which belong to Prince Antoine, and which have grown so high, that they have been obliged to make the house higher.

It is worthy of remark, that a Baron Dietrich, in Vienna, sent out ships, at his own expense, to Brazil, to collect palms, &c., for the emperor; and such wonderful discoveries were made, that several palms were found from thirty to forty feet in height, which are now exhibited in the Brazil Museum at Vienna; by which the age of the trees can easily be ascertained, and an idea of tropical vegetation given.

The oldest orange trees in Germany are at Dresden, and have been there since the time of King Augustus the Great. He was very fond of turnery, and sent for orange trees with very thick stems from Asia; and, in order to keep them fresh, they were laid in a cellar; after a short time they began to grow; and they were removed and planted, and grew extremely well.

The largest and best green-houses in Germany are in the Burg at Vienna: they are eighty feet high, and three hundred feet long. [According to other accounts these dimensions are much exaggerated; but they will no doubt be corrected for us by Baron Jacquin, or M. Charles Rauch.] In the middle there is a space for flowers, in which, in winter, there are several thousand bulbs in flower sent every year from Holland. Once every year there is a fête in this garden, which is called the rose feast. After breakfast the company retire to a ball, where the nobility are seen waltzing, surrounded by flowers.

The best imitation of nature is seen at Schonbrunn, where, in the new hot-houses, you might fancy yourself in a Brazilian forest. The *Caladía* and other *Aroideæ*, *Cymbidia*, *Scitamineæ*, and *Tillandsiæ*, grow hanging down from old trees. The ferns grow in deep shade among rocks. This arrangement was made by M. Schott, court gardener, who was several years in Brazil, and who has succeeded in giving these plants such a natural appearance.

Amongst the most remarkable gardens in Germany are those of Laxenburg, Bruck, Cassel, Munich, the new garden at Potsdam, the gardens at Mannheim, at Frankfort, and the new gardens at Stuttgard, which contain four hundred acres, and have cost, perhaps, already more than a million of florins.

Amongst the Hungarian gardens, those that belong to Princess Chrasalkowitz in Getelo, the Count of Brunswick in Corompa, and Prince Esterhazy at Eisenstadt, Count Szandor, Count Festetics, and several others, are the most worthy of notice.

In Bohemia, the most remarkable are those of Prince Kinsky, Prince Taxis near Leitmeritz, Count Tuff near Brun, and Count Sternberg near Praeg, Schonborn, Szinnen at Tchonhoff near Toeplitz, Prince Clari at Toeplitz, and Count Wallis and Count Canal in Prague.

Amongst the most considerable landscape-gardeners at present in Germany may be reckoned the following :—

M. Zeyher in Schweitzengen. He has laid out the gardens at Schweitzengen, Mannheim, Carlsruhe, and Baden.

Riedel. He laid out the park at Laxenburg, and several private gardens about Vienna.

Lenne at Berlin. He has laid out the gardens at Potsdam and Magdeburg; and we have great expectation from his improvements now making in the park at Berlin, known as the Thier Garten.

Skell. He laid out the gardens about Munich.

Claus. He has improved the gardens at Cassel.

Otto. He laid out the botanic garden at Berlin.

Lubek. He laid out the park at Bruck on the Leytha.

Schoch. He laid out the park at Worlitz.

Ritter. He laid out the parks at Presburg, at Konigshaiden, Gambo, Mayerhoff, St. Miholy, Zurz, and several others.

The following dilettanti architects and nurserymen have laid out gardens :—

Prince Puckler Muskau. He laid out his own garden in Muskau.

Carlowitz. He laid out some gardens in Dresden.

Derseik. He laid out the botanic garden, and some others, in Dresden.

Koch, Architect in Vienna. He laid out the garden of Prince Kinsky, in Prague, the gardens of the Counts Caroly and Crdady, in Hungary.

Rosenthal. He laid out Petzlersdorf near Vienna, and several others.

Bosch. He laid out the garden at Stuttgart, and the botanic garden at Rosenstein.

Kins. He laid out the gardens at Leipzig.

Rinz, Nurseryman. He laid out several places about Frankfort, and the public garden on the ramparts.

Authors who have written on gardening :—

Puckler Furst von Moskau. Andeutungen der Landschafts Gartenkunst. Folio. 10l.

Zeyher, Garten Director. He is preparing a work on Perspective, and Light and Shade. He has written a work called Beschreibung des Schweizingen Gartens, mit kupfer. 8vo.

Otto. Glashauser-bau, Die Cacteen, &c. &c.

Antoine. Monographie der Pfirschen.

Schott. Filices.

Boch. Hortus Schonbrunnensis.

Bouchée. Blumen Treibereyen.

Skell. He has written some articles in the Prussian Transactions.

Kins. Baunzucht.

Ritter. Kunstliche Treibereyen. 8vo.

Schoch. Kleine Schrift uber Anlagen.

The above notes were furnished by M. J. Ritter, Garden Director in Austria and Hungary, whilst in London, in July, 1835. Though we have spared no pains to get the names of places given above properly spelled, yet we fear we have not in every case succeeded. M. Ritter saw one proof before he left London, and we sent another to the office of the Austrian Embassy.—(*Gard. Mag.*)

ART. III. *Massachusetts Horticultural Society.*

Saturday, July 2, 1836.—Exhibited. From T. Lee, Esq., *Rhododendron maximum*, *Kalmia latifolia*, *Magnolia glauca*, *Collinsia bicolor*, *Collomia coccinea*, *Eschscholtzia californica*, *Pentstemon atropurpureum* and *Linaria genistifolia*. From E. Breed, Esq., Charlestown, dahlias and carnations. From J. A. Kenrick, *Paeonia albiflora* var. *Whittlèjii*, *Humei* and *fragrans*, a great number of fine roses, blue and white Canterbury bells, honeysuckles, *Spiræa filipendula*, irises, clematis, *Kalmia latifolia*, &c. From S. Sweetser, *Gladiolus natalensis*, *Paeonia albiflora*, *Humei*, *Phlox maculata*, moss roses, geraniums, sweet-williams, foxgloves, and fine specimens of Bow's Claudius pink.

From S. Walker, the following kinds of fine pinks:—Bow's Claudius, Sir Isaac Newton, Robinson's Navirina, Queen Caroline, Wellington, Major Shaw, Lady Cobbett and Wells's Favorite; also, fine ranunculuses, viz., Julius, Parisian, Plato, Tenenaire, Louise, Viscount Wentworth, Eliza and Nonius; also, specimens of *Ænothëra microcarpa*, *Frazeri* and *grandiflora*, *Campánula persicifolia* and var., álbo, álbo plêno and double blue, *Spiræa filipendula*, *Astrántia mājor*, *Epilóbium spicatum*, *Delphinium sinensis* flóre plêno, *Lythrum verticillatum*, double white rockets, clematis, fine named pansies, a seedling rose, and several other beautiful kinds. From E. M. Richards, *Sophora australis*, foxgloves, lupins, pinks, *Lychnis Flosculi*, &c. From Hovey & Co., *Astrántia mājor*, *Campánula Trachelium* flóre plêno, and aggregated, *Gaillardia aristata*, *Phlox maculata*, disticha, glomerata, bimaiculata and *sauvœolens*, *Silene compácta*, and several kinds of fine roses, including the moss Luxembourg, perpetual white, blush and prolific; also, a fine seedling pink. From M. P. Wilder, *Cereus speciosissimus*, *Gladiolus floribunda*, *Collinsia bicolor*, and several varieties of moss roses, viz. *blanche nouvelle*, blush, *coccinea*, *de la fleche*, and the common red.

Fruits: from T. Hastings, Keen's seedling strawberries. From J. L. L. F. Warren, Methven scarlet and a seedling kind. From E. Vose, Methven scarlet and Downton. From Hovey & Co., seedling strawberries.

July 9th.—Exhibited. From Wm. Kenrick, *Paeonia albiflora* *Humei*, *Delphinium elatum*, *Spiræa filipendula*, roses, honeysuckles, &c. From J. A. Kenrick, *Spiræa levigata*, *Delphinium sinensis* and *elatum*, *Paeonia albiflora* *Humei* and *fragrans*, azaleas, roses, dahlias, *Rhododendron maximum*, *Kalmia latifolia*, &c. From S. Sweetser, *Hoya carnosa*, foxgloves, dahlias, geraniums, double white and scarlet *lychnis*, pinks, &c. From M. P. Wilder, *Pentstemon digitalis* and *diffusum*, *Collinsia bicolor*, *Paeonia albiflora* *Humei*, *Alstromeria pittacina*, *Hibiscus Rosa sinensis* flóre plêno, *Lupinus polyphyllus*, *Verbena chamædrifolia* *Salpiglossis picta*, dahlias, roses, and two geraniums, viz., *grandissima* and *Sesostus*.

From Hovey & Co., *Veronica elegans* and *spicata* *pumila*, *Digitalis lutea* and *purpurea*, *Pentstemon diffusum* and *ovatum*, *Eschscholtzia erodea* and *californica*, *Spiræa ulmaria*, *Phlox sauvœolens*, *Campánula Trachelium* plêno, *Silene compácta*, *Astrántia mājor*, double white and scarlet *lychnis*, seedling pinks, &c. From Messrs. Winship, *Delphinium sinensis*, *Veronica elegans*, double and single blue bells, *Paeonia albiflora*, *Whittlèjii* and *fragrans*, phloxes, *Campánula persicifolia* and var. plêno, *Coreopsis lanceolata*, *Astrántia mājor*, *spireas*, &c. From

S. Walker, *Ænothëra Frazèri*, *Epilòbium spicàtum*, *Pentstemon diffusum*, *Campánula persicifolia* and var. *álba plèno*, *spiræas*, *ranunculuses*, &c. From T. Lee, *Rhododéndron máximum*, *Magnòlia glauca*, *Crèpis barbàta*, *Málva moschàta*, *Calendrìnia grandiflòra*, *Gaillàrdia aristàta*, the double Ayrshire rose, &c.

Fruits: from E. Vose, black tartarian cherries. From J. L. L. F. Warren, gooseberries and fine Persian melons. From Hovey & Co., seedling strawberries. From T. Hastings, Keen's seedling strawberries. From Wm. Hawks, Lynn, Downton and pine strawberries.

July 16th.—Exhibited. From S. Walker, *Spiræa ulmària*, lobàta, filipéndula and filipéndula plèno, *Delphiniùm sinènsis* fl. pl., *Coreòpsis lanecolàta*, *Epilòbium spicàtum*, *Verbèna chamædrifolia*, pansies, pinks, &c. From S. Sweetser, dahlias, white lilies, *Campánula collina*, *Agapánthus umbellàtus*, &c. From M. P. Wilder, dahlias, and *Erythrina Crìsta-gállì*. From the Messrs. Winship, *Hóya carnòsa*, phloxes, double blue bells, white lilies, martagon lilies, *Cràssula coccinea Passiflòra carùlea*, &c. From R. T. Paine, *Antholyza preálta*. From S. Downer, fine specimens of double dwarf rocket larkspurs. From W. Kenrick, bee larkspurs, smoke tree, roses, honeysuckles, *spiræas*, &c. From Hovey & Co., *Philòx ròseum*, *cárnea*, and *pyramidalis álba*, *Spiræa lobàta* and *ulmària*, *Campánula aggregàta*, *eliptica*, *collina*, *Lorrèjii*, mèdium, and *Trachèlium plèno*, double white and scarlet lychnis, *Ænothëra microcàrpa*, *Asclèpias tuberòsa*, *Clàrkia élegans*, *Eschschòltzia cròcea*, *Verónica élegans*, hybrida and spicàta pùmila, *Potentilla Mayiàna*, and *Russelliàna*, &c.

Fruits: from T. Mason, Franconia, white Antwerp and seedling grape raspberries. From I. P. Davis, sweet apples, very beautiful.

July 23d.—Exhibited. From the botanic garden, by Wm. Carter, *Yucca filamentòsa*, *Lilium canadènsis*, and var. *rùbra*, *Lysimàchia vulgàris*, *Asclèpias tuberòsa*, *Cràssula coccinea*, *Passiflòra racemòsa* var. *purpurea*, *Rhododéndron máximum*, *Philòx pyramidalis álba*, (?) *Shepherd's* and seedling kinds, *Spiræa lobàta* and *ulmària*, *Prenánthes integrifolia*, *Verónica élegans*, &c. From S. Walker, *Lysimàchia vulgàris*, *Campánula álba plèno*, *Cimicífuga fœtida*, *Spiræa lobàta*, *Pentstemon diffusum*, pinks, dahlias, &c. From T. Lee, Esq., *Málva moschàta*, *Lysimàchia quadrifolia*, and *Ròsa rubifolia* (?). From John Hovey, the Mobach and provins roses. From S. Sweetser, dahlias, *Verónica neglécta*, *Dracocéphalum rèpens*, *geraniums*, *corcopsis*, &c.

From M. P. Wilder, dahlias, viz., *Erecta*, *Pothecary's Queen of Sheba*, *Globe*, *Cicero*, and *Douglas's Augusta*; also, moss roses, including the moss *cristàta*, *Céreus speciosissimus*, *Antholyza preálta*, *Tigridia pavònia*, *Gloxinia maculàta*, double white campanula, semi-double *eschscholtzia* and *Verbèna chamædrifolia*. From Hovey & Co., the following kinds of dahlias:—*Queen of dahlias*, *Widnall's Enchanter*, *Granta*, *Queen of Roses*, and *Chancellor*, *Springfield Rival* and *Douglas's Augusta*; also, *Philòx fimbriàta*, *ròseum*, *penduliflòra* *Shepherd's*, *pyramidalis álba* and *undulàta pùmila*, *Státice Gmelina*, *Láthyrus grandiflòrus*, *Málva moschàta*, *Potentilla Mayiàna* and *Russelliàna*, *Eschschòltzia cròcea*, and *Campánula carpàtica*.

Fruit: Gooseberries from J. Hovey.

ART. IV. Quincy Market.

		From	To			From	To
<i>Roots, Tubers, &c.</i>		\$ cts.	\$ cts.	<i>Pot and Sweet Herbs.</i>		\$ cts.	\$ cts.
Potatoes :				Parsley, per half peck,		50	75
Common, { per barrel,	2 00	2 50		Sage, per pound,		17	20
{ per bushel,	1 00			Marjoram, per bunch,		6	12
Chenangoes, { per barrel,	2 00	2 50		Savory, per bunch,		6	12
{ per bushel,	1 00			Spearmint, per bunch,		6	
New, { per bushel,	1 50	2 00		<i>Fruits.</i>			
{ per peck,	37½	50		Apples, dessert :			
Turnips :				Russetts, { per barrel,	none.		
New, per bunch,	8			{ per bushel,	2 50	3 00	
Yellow French, per bushel, none.				New { per bushel,	1 50		
Onions :				{ per peck,	50		
New, per bunch, { red,	8			Pears :			
{ white,	6	8		Juncating, { per bushel,	none.		
Beets, per bunch,	6	8		{ per peck,	1 50		
Carrots, per bunch,	6	8		Peaches, each,	12½	25	
Parsnips, per bushel,	none.			Strawberries, per box : (1 qt.)			
Horseradish, per pound,	8	12½		Wood,	25	37½	
Radishes, per bunch,	3	6		Cherries, per quart,	17	25	
Shallots, per pound,	20			Gooseberries, per quart,	17	25	
Garlic, per pound,	14			Currants, per quart,			
<i>Cabbages, Salads, &c.</i>				White,	17	20	
Cabbages : per dozen,				Red,	17	20	
Early York,	50	1 00		Black,	10	12½	
“ Sugar-loaf,	50	1 00		Watermelons, each,	50	1 00	
Cauliflowers, each,	12½	25		Pine Apples, each,	25	37½	
Lettuce, per head,	3	6		Grapes : (hot-house,) pr pound,			
Celery, per root,	12½			Black Hamburg,	1 00		
Tomatoes, per dozen,	50	75		White Sweet-water,	75	1 00	
Rhubarb, per pound,	4	6		Blueberries, per quart,	10	12½	
Peas : { per bushel,	1 00	1 25		Blackberries, per quart,	12½		
{ per peck,	25			Cucumbers, per dozen,	37½	50	
Beans :				Cranberries, per bushel,	3 00	4 00	
String, { per bushel,	1 00	1 50		Oranges, { per box,	4 00		
{ per peck,	37½	50		{ per dozen,	25	50	
<i>Squashes and Pumpkins.</i>				Lemons, { per box,	5 00	6 00	
Summer, crookneck, per doz. none.				{ per dozen,	37½		
West India, per pound,	2	3		Shaddocks, each,	25		
Summer Bush, per dozen,	37½	50		Walnuts, { per barrel,	3 00	3 50	
				{ per bushel,	1 75		
				Almonds, (sweet) per pound, . .	12	14	
				Filberts, per pound,	4	6	
				Castana,	3	6	

REMARKS. During the past month the weather has been favorable to the maturity of early crops. There is about ten days difference between this season and the last—the latter having been the earliest. Old potatoes, as we predicted, are exceedingly scarce, and command enormous prices; new ones come to hand slowly, and are not of very large size—they were abundant last year at a much earlier date. Turnips are fine. Onions not abundant: some of the Connecticut reds, or, as they are termed, rareripes, have come in the past week. Beets are plenty. Carrots are brought in, but they are yet small.

Early cabbages are not yet plentifully supplied. A few cauliflowers of small size have sold at quotations. String beans are very scarce—the early frosts in the month of May having destroyed nearly two thirds of the expected crop. Peas are not plenty nor very good. Bush

squashes came to hand in tolerable quantities: some have been brought from New York, but they are far inferior to those grown by our marketers: many of them are striped, some three-colored, transversely, evidently a mixture of the seed. We are happy to perceive that our market gardeners are very particular in this respect, and pay much regard to keeping their seed genuine, or procuring such as are so.

Of fruits, particularly fine kinds, the market does not seem to be remarkably well stocked. Old apples, with the exception of a few russets, are all gone; some new ones have been received from New York, but rather inferior. Pears are not yet plentiful—few except the little muscats, as they are called, having yet come in. Cherries have not been abundant,—the early frosts and the late rains having contributed largely to the destruction of the fruit. No strawberries are now to be found except the Wood. Currants and gooseberries are tolerably plenty. Raspberries scarce. Blueberries come to hand in tolerable abundance at this season. Few watermelons are to be had: a small lot, among which were some muskmelons, arrived last week, but in bad order. Pine-apples are very scarce. Cucumbers just begin to come in from the open garden; the supply hitherto has been from frames. Of cranberries there are yet some remaining on hand: but the numerous new fruits which are to be had causes rather a dull sale at this season. Lemons are very scarce; there having been no arrivals lately; we believe our quotations are as low as they can be bought. *Yours, M. T., Boston, July 23d, 1836.*

ART. V. Obituary Notice.

Farther Details respecting the Death of Mr. Douglas. [See Vol. I, p. 239.]—The following particulars of this most terrific occurrence are taken from that excellent publication, the *Mirror*, for March 26, 1836. The editor acknowledges having copied it from *Ke Kumu Hawaii*, a mission newspaper, published at Honolulu, Oahu, which was kindly lent to him by a subscriber to the *Mirror*. This newspaper is printed at the mission Press of Oahu, and in the native language of the Sandwich Islands, except the paper relating to Mr. Douglas, which is in English. It appears that the lamentable event occurred on July 12, 1834, six months sooner than, according to a notice in the *Magazine of Natural History* (vol. viii. p. 410), was supposed to be the case.

“The document whence these particulars have been extracted is dated Hilo, Hawaii (the principal of the Sandwich Islands), July 15, 1834, and is addressed to Richard Charlton, Esq., his Britannic Majesty’s consul there.

“Intelligence of this distressing event reached Hilo on the morning of July 14, when a native came up, and, with an expression of countenance which indicated but too faithfully that he was the bearer of sad tidings, inquired for a Mr. Goodrich. On seeing him, he stated that the body of Mr. Douglas had been found on the mountains in a pit excavated for the purpose of taking wild cattle; and that he was supposed to have been killed by the bullock which was in the pit when Mr. Douglas fell in. Never were the feelings of the writers of this letter so shocked; nor could they credit the report till it was painfully confirmed,

as they proceeded to the beach, whither the body of Mr. Douglas had been conveyed in a canoe by the native who brought the news of his death. Upon further inquiry, this person related, in substance, as follows:—That on the evening of the 13th instant, the natives who brought the body down from the mountain came to his house at Laupahoioi, about twenty-five or thirty miles distant from Hilo, and employed him to bring it to this place in his canoe. The particulars which he learned from them were as follows:—Mr. Douglas left Kohala Point during the previous week, in company with an Englishman as a guide, and proceeded to cross Monona Kea on the north side. On the 12th instant Mr. Douglas dismissed his guide, who cautioned him, on parting, to be very careful lest he should fall into some of the pits for taking wild cattle; describing them as being near the places to which the animals resorted to drink. Soon after Mr. Douglas had dismissed his guide, he went back a short distance to get a bundle which he had forgotten; and, as he was retracing his steps, in some fatal moment, he fell into one of the pits, into which a bullock had previously fallen. He was found dead in the pit by these same natives, who, ignorant, at the time, of his passing, were in pursuit of bullocks, and, on coming up to the pit, found a small hole in one end of the covering of it. At first they conjectured that a calf had fallen in, but, on further examination, discovered traces of a man's steps, and soon afterwards saw his feet in the pit, his body being covered with dirt and rubbish. They went immediately in pursuit of the guide, who returned, shot the bullock in the pit, took out the body, and hired the natives, at the price of four bullocks (which were killed immediately), to convey the body to the seashore. He himself accompanied them, and procured the native to convey the body to Hilo, promising to follow immediately, and bring with him the compass, the watch (which was somewhat broken, but still going), some money found in Mr. Douglas's pockets, and a little dog, a faithful companion of the departed traveller. Thus far the report of the native who brought the body in his canoe, and who professed to relate the facts as he learned them from the natives who came down from the mountain.

“What an affecting spectacle was presented, on removing the bullock's hide, in which the body had been conveyed! It appeared to be in the same state as when taken from the pit. The face was covered with dirt, the hair filled with blood and dirt, and the coat, pantaloons, and shirt were considerably torn: the hat was missing. On washing the body, it was found to be in a shocking state: there were ten or twelve gashes on the head, a long one over the left eye; another, rather deep, just above the left temple; a deep one behind the right ear; the left cheek-bone appeared to be broken, and also the ribs on the left side; the abdomen was much bruised, as were also the lower parts of the legs.

“After laying out the body, the first thought was to bury it within Mr. Goodrich's premises; but, when a spot had been selected and cleared, doubts were suggested, by a person who had assisted, and who had been much engaged in taking wild cattle, whether the wounds on the head could have been inflicted by a bullock. The matter did not seem clear: many parts of the story were dark and confused; and the following questions arose among the persons present:—How was it that Mr. Douglas was alone, without any guide, whether foreigner or native? Where was John, Mr. Diell's colored man, who left Honolulu with Mr. Diell, and who, on missing a passage with him from Lahaina, embarked with Mr. Douglas, as had been ascertained from the captain of the vessel in which Mr. Douglas sailed from Lahaina to Kohala Point, and there left the vessel, with Mr. Douglas, on the morning of

the 19th instant, in order to accompany him across the mountain to Hilo? How was it that Mr. Douglas should fall into a pit when retracing his steps, after he had once passed it in safety? And, if a bullock had already fallen into the pit, how was it that he did not see the hole necessarily made in the covering? It was, therefore, thought due to the friends of Mr. Douglas, and to the public, whom he had so zealously and usefully served, that an examination should be made of his body by medical men. The only way to have this effected was by preserving the body, and either sending it to Oahu, or keeping it until it could be examined at Hilo. The former plan seemed most desirable. Accordingly, the contents of the abdomen were removed, the body filled with salt, and placed in a coffin, which was filled up with salt; and the whole was enclosed in a box filled with brine. After the body was laid in the coffin, the members of the mission family and several foreigners assembled to pay their tribute of respect to the mortal remains of the deceased: prayers were offered up, and a brief address was made. These services being concluded, the body was removed to a cool native house, where it was enclosed in the box.

"As neither the guides nor any natives had arrived by the 16th inst., two foreigners were despatched to the place where the body was received on the sea-shore, with directions to search out the natives who discovered the body, to go with them to the pit, and, after making as full inquiries as possible, to report at Hilo immediately. So far as could be ascertained, the guide was an Englishman, a convict from Botany Bay, who left a vessel at the Sandwich Islands some years previously: he had a wife and one child with him, to which circumstance was attributed his delay. In the meantime, it was feared that the captain could not convey the remains of Mr. Douglas to Honolulu, as his vessel was filled with wood, canoes, food, &c.

"In the afternoon, however, Edward Gurney, the English guide, arrived. He stated that, on the 12th instant, about ten minutes before six o'clock in the morning, Mr. Douglas arrived at his house on the mountain, and wished him to point out the road to Hilo, and to accompany him a short distance. Mr. Douglas was then alone, but said that his man had given out the day before; referring, probably, to John, Mr. Diell's colored man. Having taken breakfast, Edward accompanied Mr. Douglas about three quarters of a mile; and, after directing him in the path, and warning him of the traps, proceeded about half a mile further with him. Mr. Douglas then dismissed the guide, after expressing his anxiety to reach Hilo by evening, thinking that he could find out the way himself. Just before Edward left him, he warned him particularly of three bullock-traps, about two miles and a half ahead; two of them directly on the road, the other on one side.

"Edward now returned home to skin some bullocks which he had previously killed. About eleven o'clock, two natives came in pursuit of him, saying that the European was dead, and that they had found him in the pit in which the bullock was. They stated that, as they were coming up to this pit, one of them, observing some of the clothing on the side, exclaimed "*Lole!*" and, in a moment afterwards, discovered Mr. Douglas within the pit, trampled under the feet of the bullock. Edward accordingly ran to the house for a musket and ball. On reaching the pit, he found Mr. Douglas lying upon his right side, and the bullock standing upon his body. He shot the animal, descended into the pit, drew the carcass to the other end of it, and got out the body of the poor traveller. His cane was with him, but the bundle and dog were missing. Edward, knowing that he had a bundle, asked for it. After a few moments' search, a loud barking was heard at a short distance ahead, on the road leading to Hilo; and, on reaching

the spot, the dog was found with the bundle. On further examination, it appeared that Mr. Douglas had stopped for a moment and looked into an empty pit, and also into that wherein the bullock was taken; that, after passing on up the hill some fifteen fathoms, he laid down his bundle, and returned to the fatal pit; and that, while looking in, by making a misstep, or by some other means, he fell into the power of the infuriated animal, who speedily executed the work of death.

"The body was covered in part with stones; which circumstance is thought to have prevented its being entirely crushed. After removing it, Edward took charge of the dog and bundle, and of Mr. Douglas's chronometer, his pocket compass, keys and money, found upon him; and, having hired the natives to carry the body to the shore, (a distance of about twenty-seven miles), accompanied them, and came thence to Hilo. The letter adds: 'This narrative clears up many of the difficulties which rested upon the whole matter; and, perhaps, it will afford a pretty satisfactory account of the manner in which Mr. Douglas met his awful death.' The writers then propose to the consul to send the body to Hilolu, should the captain consent to convey it; if he should not, the corpse was to be interred. We are not aware which course was adopted. The black man mentioned in the letter probably lost his way, and perished in the mountains, as he has not since been heard of."—(*Gard. Mag.*)

ART. VI. *Meteorological Notice.*

FOR JUNE.

THE month of June was almost unprecedented for its degree of cold, cloudy, and wet weather. During the previous part of this month the thermometer ranged scarcely up to the temperate point. North and easterly winds were prevalent, with misty weather and drizzling rains. After this a few days of bright sunshine succeeded, which, however, lasted only a short time; cloudy weather, with easterly winds, set in, and, with but little intermission, lasted until the end of the month.

THERMOMETER.—Mean temperature, $57^{\circ} 40'$ —highest, 85° ; lowest, 33° above zero.

WINDS.—N. nine days—N. E. nine—E. four—S. E. one—S. five—W. two days.

Force of the Wind.—Brisk, eighteen days—light, twelve days.

Character of the Weather.—FINE, fourteen days—FAIR, two days—CLOUDY, fourteen days.

Rainy, days.

THE
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SEPTEMBER, 1836.

ORIGINAL COMMUNICATIONS.

ART. I. *On the Use of the Osage Orange (Maclura aurantiaca), as Food for Silk-worms.* By T. S. P., Beavertown, Va.

SOME months ago, the Farmer's Register contained a translation of an interesting article by M. Bonafons, giving the result of an experiment on feeding the silk-worm on the leaves of the *Maclura*. Although the authority of that gentleman may be regarded as decisive on any matter connected with the culture of silk, yet, as many substitutes for the mulberry have been successively used and discarded, it was reasonable to suppose the *maclura* might share the same fate. On trial, however, I find it to answer all the purposes for which M. Bonafons recommended it; and as the silk business is becoming an important branch of the industry of the United States, I am induced to detail, in corroboration thereof, the result of my own experiment.

In the month of May I had a few thousand eggs to hatch; and, during the three first ages, the worms were fed exclusively on the leaves of the *maclura*. At the commencement of the fourth age they were divided into several parcels, with a view of giving to each a separate kind of food. About one third were continued on the same—the native mulberry was given to an equal number—a portion of the balance was fed on the *maclura* and Chinese mulberry indiscriminately—and the remainder on the Chinese mulberry alone. During the process, I could not perceive that the worms manifested any partiality between the leaves of the *maclura* and those of the Chinese mulberry,—if they evinced any, it was certainly not in favor of the latter. But they greatly preferred *either* to the leaves of the red mulberry,

some of which I would occasionally lay on the shelves, where they would suffer them to remain until compelled by hunger to eat them. On the contrary, when those which had the red mulberry leaves assigned them, were furnished with a few of the maclura, they would collect around the latter and devour them with avidity, before they would begin to feed on their accustomed diet.

The relative value, however, of the maclura and Chinese mulberry, for the production of silk, was only to be fully determined after the formation of the cocoons. It may be recollected by those who read the article of M. Bonafons, that he regarded the maclura as chiefly valuable for feeding the worms during their early ages; that subsequently they should be supplied with the mulberry, their natural food; and that, though the former would produce silk of a fair quality, yet it would be inferior, and in diminished quantity, compared with the product of the mulberry. I find this to be true as it regards the maclura and *Chinese* mulberry—so far, at least, as respects the size of the cocoon; but the maclura is at least of equal value with the red or native mulberry. The worms fed on the Chinese mulberry spun cocoons weighing from thirty to forty-five grains;—those raised on the maclura and Chinese mulberry combined made their balls somewhat lighter on the average,—while the weight of those obtained from the maclura and the red mulberry respectively was about equal, and still less than either of the preceding. The quality of the thread for manufacturing purposes I am unable to pronounce upon, not having yet submitted specimens to a competent judge. The cocoons were nearly all of a pale straw color.

If the value of the maclura consisted only in furnishing food for the silk-worm, it might, from its extreme hardness, and consequent exemption from late spring frosts, be deemed well worthy of planting; but when to this, other important uses to which it may be applied are superadded, it appears to present irresistible claims to the notice of the farmer and horticulturist. I may therefore be excused for dwelling more at large on its merits, which have as yet scarcely begun to be appreciated, or even known.

In many parts of the United States, the scarcity of timber has for many years been sensibly felt; notwithstanding which, our forests still continue to disappear. To mitigate the evils of this alarming destruction, efforts have frequently been made to substitute live for dead fences; but it is believed that hedges have not, to any considerable extent, answered the purposes of an enclosure. After all the trouble and expense that have been bestowed upon them, they have, in most instances, finally dwindled away and been rooted out. Hence it may be inferred, that

the plants used in their construction have been too feeble in their constitution, and therefore incapable of attaining the necessary size and development. Now it has been confidently asserted, that the maclura will make a most substantial and impervious hedge—a fact which cannot well be doubted by any person who will take the trouble to examine its manner of growth. The branches are thickly set, and the lateral ones almost uniformly take a horizontal direction: they are, moreover, armed with a number of sharp and very rigid spines, which do not disappear, as has been stated, after one or two years, but remain permanently. The plants grow with such vigor, that it would only require a few years, under careful treatment, to rear an excellent hedge from the seed. To those who are fond of the ornamental it may be also recommended for the extreme lustre of its foliage and the magnificence of its fruit.

Hitherto the means of propagating the maclura have been rather limited. It grows but indifferently from cuttings, and not with certainty from slips of the roots. The only mode which can be depended on for extensive increase, is by the seed. These have not often been perfected on this side of the Mississippi, owing partly to the small number of trees which gentlemen have introduced into their grounds; and also to inattention to the fact that they are diœcious. With a knowledge of this characteristic, there is no difficulty in having them to bear abundantly. There is one growing in my garden, now seven or eight years old, which has matured its fruit for a year or two past, and which would have borne considerably earlier, had not the staminate plant perished which was ordered with it. The one which was subsequently obtained was feeble in its growth, and slow in flowering. Last year the number of seeds it ripened amounted to many thousands. These readily vegetated in the spring, and the seedlings are now growing in nursery rows, as finely as could be desired.

I regret that I have not been able to compress my remarks into a smaller space; but, before concluding, I will take the liberty to suggest, to some of our enterprising seedsmen, the propriety of obtaining a parcel of the seed of the maclura from its native forests. They may be gathered in any quantity on the Red River, and in the contiguous parts of Arkansas. It is the practice now to compass sea and land to discover a new vegetable for our tables, or a flower for the parterre; and while the seeds of these productions meet with a ready sale, in consequence of the increased taste for horticultural pursuits, it is not to be doubted that a considerable demand will also be found for those of a plant, which combines, in an eminent degree, the useful with the ornamental.

Yours,

Beaverdam, Va., 7th mo., 1836.

T. S. P.

ART. II. *On the Cultivation of several of the most beautiful Species and Varieties of Cactus and Cereus.* In a Series of Papers. By J. W. RUSSELL.

Cereus flagelliformis (creeping cereus), is an old inhabitant of the stove and green-house. The stems of the plant, when in a healthy luxuriant state, resemble a whip-lash, whence its trivial name, *flagelliformis*. This interesting species, when interspersed with some of its co-species, that are of a more robust growth, makes an elegant contrast, showing, to the most careless observer, the difference in the habits of growth in the same family of plants. The flowers expand their blossoms in the months of May and June, and are of a dark rose color, arranged indiscriminately along the stems of the plants,—although sometimes a number of them are closely set together, not in a *cluster*, but in one straight line, one or two inches apart. It is a native of Peru, and has been cultivated more than one hundred years.

Epiphyllum speciosum Haworth (*Cactus speciosus* B. R.) is also an old favorite: the stems of the plant are thin and flat, from one half an inch to two inches in width, and of a very irregular habit of growth; but by judicious pruning it can be made an elegant plant. Stands of a circular form, or flat, in the shape of a ladder, should be used for training this plant to; the shape of the stand, however, may be left altogether to the taste of the cultivator, as something of the kind is indispensably necessary, to train up the shoots, that they may be kept in regular order. The superfluous growths must be taken off with a *sharp* knife, remembering to *reserve*, if possible, the strongest growths. The admirable appearance of this plant when in full bloom attracts the attention of every person; its beautiful rose or blush colored flowers expand in June and July, and the plant presents a splendid show for a fortnight or three weeks. The flowers are produced from the sides of the stems, and the dark colored vein, which is generally observable, that leads from the centre of the stem to the bud, is almost a sure sign of a flower. This species is a native of South America, and has been cultivated about twenty-five years.

Epiphyllum truncatum Haworth (*Cactus truncatus* Lk.) is a fine sort: the stems are flat, and about half an inch in width: the extremity of the shoot is scalloped out as though bitten off by an animal: the flowers are of a darker shade than those of *speciosum*, and more elongated—the habit of the plant more close and compact: this has been cultivated ten or twelve years.

Cereus Ackermanni is a new variety, and rivals the far-famed *Cereus speciosissimus* in the beauty of its flowers; however, it is deficient of the fine purple tinge which is so prominent a fea-

ture on the inner petals of the latter plant. The flowers expand in a similar manner, and continue three or four days in great perfection, and they are also equally large; by some cultivators it is esteemed second to none of its co-species that are yet known. The habit of the plant resembles *E. speciosum*; the stems are more fleshy and broader, and of a lighter green color; sometimes the young growths are quadrangular or four-sided, but they ultimately grow out to a thin expansion, broad and flat. The time of flowering is in May and June: it has been cultivated but five or six years.

Cereus Jenkensonia is also a new variety, and resembles *E. speciosum* in its habit of growth: the flowers are of the same shape, only considerably larger: the color an elegant crimson: time of flowering June and July, and has been cultivated about four years.

Cereus Vandesia is quite new and scarce: this also resembles *E. speciosum* in its habit of growth; the flowers are of the same shape, but as large as those of *Jenkinsonia*, and a shade darker in color. It is a free grower, and well adapted for training to a trellis, or a round stand. Time of flowering, July and August.

Opuntia vulgaris *Haworth* *Cactus Opuntia* *L.* (Indian fig), has been cultivated more than two hundred years. It is too well known to need any description; with good treatment it will grow luxuriantly. Its large fleshy broad stems are admirably well adapted for grafting all the kinds I have now spoken of upon, which can be done in the following very simple manner, viz:—first, take off the cutting from the plant that you wish to insert on the Indian fig—then make an incision in the stem with a sharp penknife, as near the same shape and size as possible as that of the cutting; observe to take the piece out so as to allow the scion to be inserted about an inch deep. If this is neatly done there is no fear of success. Let any person imagine the splendid effect a large plant will have four or five feet high, spreading in every direction, with some of the sorts here mentioned grafted on it, growing most luxuriantly and flowering profusely; this I have seen—and I can assure every reader of this that it was a beautiful object.

I hope ere long to see this very interesting family of plants more generally cultivated, and the compost recommended in my former papers tried, which I think will be all that is necessary, to ensure its permanent use, in preference to the sandy soil, destitute of any richness, which is generally recommended.

Yours,

Mount Auburn, August 8, 1836.

J. W. RUSSELL.

ART. III. *Calendar of Plants and Shrubs in bloom from the month of May to October, inclusive.* By the CONDUCTORS.

IN the month of July, a larger number of herbaceous perennials are in flower than in any other during the season; and where there is not a good collection, the flower border presents rather a barren and uncheerful appearance to the lover of Flora. Roses and spring flowers, generally, are gone, and annual flowers have not yet come into bloom, with the exception of a few early ones of not a very showy character. By fall planting, which we have several times recommended, and which we now again remind our readers of, as the season is rapidly approaching in which it should be done, many kinds of annuals will bloom much finer than if the planting of such was delayed until spring. We hope those of our readers who are desirous of adorning their gardens with annual flowers in the earlier part of the season, will not let the opportunity pass by.

The plants in pots, distributed on the lawn or on the borders, will now have partly made their summer growth. Hydrangeas will be in full bloom, and when the specimens are large, and covered with numerous clusters of flowers, they present a showy display. Lemon and orange trees, if loaded with fruit, have a fine effect. Petunias of the two kinds, *phœnicea* and *nyctaginiflora*, planted in vases and elevated on pedestals, as recommended in our last, have an imposing appearance, and are unique in their kind. But we have some remarks to make on the suitable varieties of plants for vases, which we shall give at some future time.

July.—Of shrubs in flower, there are the *Azalea viscosa*, *Spiræa lævigata*, *Hypéricum Kalmianum*, *Magnolia glauca*, the smoke tree and honeysuckles; and other kinds, which were enumerated last month, remain in bloom: the herbaceous plants, which are numerous, are as follows:—*Gentiana crinita* and *cruciata*, the former beautiful: *Campánula carpáthica*, *azúrea*, *aggregata*, *nítida*, *médium*, *Trachelium pléno*, *liliflora*, *sarmática*, *collina*, *persicæfolia*, *p. flore pléno* and *flore pléno álbo*, *Lorrèjii*, and *eliptica*, *Phlóx ròsea*, *cárnea*, *Shepèrdi fimbriata*, *pyramidalis álba*, *p. penduliflora*, and *undulata pùmila*; all these are elegant, particularly *ròsea* and *fimbriata*: *Verónica neglécta*, *hybrida*, *spùria*, *élegans* and *spicàta pùmila*: *Delphinium grandiflorum* and *grandiflorum flore pléno*: *Gailláirdia aristàta*, in flower all summer: *Cenothèra glauca*, *microcarpa* (*splendid*), *Frazèri* and *grandiflora*, *Coreópsis Atkinsoniana*, *tripteris*, and *lanceolata*; the latter extremely fine: *Spiræa lobata*, *ulmària* and *ulmària variegata*, *Epilóbium spicatum*, *Polemoniùm cærùleum* and *cærùleum flore álbo*: *Coronilla vimínea*, *Dracocéphalum repens*, and *altaiense*, *Astrántia màjor*, *Pentstèmon diffusum*, *ovà-*

tum, ròseum and digitàlis, *Potentilla nepalensis*, *atrosanguinea*, *Russelliana* and *Mayiana*: *Tormentilla reptans*, flore pleno; this is a charming little plant for rock work: *Verbascum pyramidàlis*, *Celsia crética*, *Aconitum napellus*, *Halleri* and *albidum*, *Gèum coccineum*, *Asclèpias tuberosa*, *Digitàlis lutea* and the common purple and white, *Lysimachia vulgaris* and *quadrifolia*, *Prenanthes integrifolia*, *Monarda purpurea*, *Státice Gmelina*, *Láthyrus grandiflorus*, *Lychnis chalcedonica* var. pleno albo and pl. coccinea and *L. grandiflora*, *Cimicífuga foetida*, *Eschscholtzia californica*, *Oxalis Déppeii*, *Lupinus polyphyllus*, sweet-williams, holyhocks, pinks of all kinds, &c. The following kinds of lilies are in full bloom this month:—*Lilium candidum*, *longiflorum*, *japonicum*, *bulbiferum*, *spectabile*, *concolor*: *Gladiolus natalensis* and *byzantium* also bloom finely this month, if planted in the autumn. They are perfectly hardy.

The plants wintered in frames, and turned out into the borders as recommended, in the month of May, will now be in full bloom; such as *Verbena chamædrifolia*, *Mimulus ròseus*, *Commelina tuberosa*, and *cælestis*, *Senecio elegans*, red and white double-flowered; *Sálvia Grahami*, *Calendrinia grandiflora*, *Pyræthrum parthenium*, stocks, *calceolarias*, *fuchsias*, *anagallises*, *petunias*, *schizanthuses*, *chrysanthemums*, sweet scabiouses, &c.

Among the annuals, the candy-tuft is beautiful, when planted in large patches; the sweet-alyssum is very delicate, and forms a pretty companion to the former, and is valuable for its fragrance. The *eschscholtzias* will be now in full flower: we do not know of a more splendid ornament to the flower border than the *E. crœcea*. It is yet rare; but as it seeds freely, we hope it will become more common by another season. We have had single plants this year, which have covered a piece of ground a yard across, that were, in the middle of the day, one mass of rich orange colored blossoms. That charming little annual, the *Gilia tricolor*, now begins to bloom: it should be in every garden.

Among the running plants, *Maurândya Barclayana* *Lophospermum erubescens*, *Cobæa scandens*, *Calámpelis scabra*, and the new dark nasturtium, if kept over the winter and turned out, will now flower abundantly. In large gardens a greater number can be admitted; but these are such as are desirable in choice collections.

ART. IV. *On the Germination of the Nelumbium Speciosum.*
By J. L. R.

HAVING received from a friend a fresh nut of this splendid oriental plant, I was induced to watch the development of its germination. After remaining in a glass of pure water on my mantel for about three weeks, I perceived a wide dehiscence near its summit, and the first emission of young roots. A compost of clay, vegetable mould and sand, in nearly equal parts, was then provided, and the nut partially planted in it. The pot was then plunged in another, glazed and water-tight, and covered with river water to the depth of three or four inches. In a few days the first leaf appeared, curiously convoluted, by its ridges being rolled towards its disk. Not long after its expansion another made its appearance, and in the course of a month five have been developed in considerable vigor. The plant then seemed to make a pause for a few days, when I perceived a strong and thick rhizoma pushing downwards from the axis, and throwing out a profusion of roots about half the distance of its length; till finally a new leaf has been evolved from the extremity of this root stake.

I have noticed, in the first volume of your magazine (p. 350), that a fine plant of this species was thriving under the culture of the Hon. John Lowell. What has been the fate of the plant? Has Mr. Lowell succeeded in flowering it?

The germination of the nelumbium is interesting, on account of the seeming absence of cotyledons, and thus possessing the anomalous character of an exogenous acotyledonous plant. Much uncertainty exists respecting its true physiological development. On the outside of the base of the albumen is the embryo, enclosed in a membranous bag or sack. This, by Richard, was considered its cotyledon, and he accordingly placed the genus among the monocotyledons and Endogeneæ. De Candolle and Mirbel considered it as exogenous and dicotyledonous, regarding the sack as a peculiar membrane, and possessing, also, a two-lobed embryo. From the structure of the stem, the character of its leaves, and also of its flowers and fruits, little doubt can remain that it more properly should be arranged according to the opinion of the two latter botanists.

The sacred Lotus of the Nile is the present species. According to Delile this celebrated locality of antiquity cannot boast of its present possession. In China, where it is extensively cultivated, its rhizoma and nuts afford a considerable article of food. These, served up with apricots, walnuts and ice, were offered at breakfast to the British ambassador and his suite. Some of the Japanese and Chinese deities are represented as

sitting on its broad and peltate leaves, thus distinguishing it as a sacred plant.

My plant *Nelumbium speciosum* var. *album*, is freely offered to any one who desires to grow this rare and splendid flower in a conservatory or proper aquarium.

J. L. R.

August, 1836.

ART. V. *On the Cultivation and Propagation of the Pink (Dianthus), more particularly the Carnation, Picotee, and Pink.* By S. WALKER.

“Jove’s flower: and, if my skill is not beguiled,
He was Jove’s flower when Jove was but a child.”

PERMIT me, dear Sirs, through the pages of your valuable Magazine, to submit a few hints to your readers on the cultivation and propagation of some of the varieties of this beautiful class of flowers, viz. the carnation, picotee and pink. The cultivation of these plants has occupied the attention, and called forth the labor and care, of some of the great and good in ages that have passed away. Would it be asking too much of the present generation, while “the school-master is abroad,” to turn aside a few moments, and admire nature in “her holiday suit and Sunday clothes?” I will take it for granted, it is not; indeed, I cannot but believe a love of flowers, and a taste for cultivating them, is rapidly increasing in every section of the country: if we look to the east or to the west, to the north or to the south, we see magazines and newspapers springing up, devoted to floriculture. Such being the case, I am induced to send you the present article, although I am aware I can add but very little, with advantage, to what others have already said on the cultivation of these plants, or bring any thing new before your readers; yet I shall endeavor to select and lay before them, in a condensed form, the directions and opinions of others, and a few general remarks of my own, on the successful cultivation of the pink, picotee and carnation.

The Carnation.—Modern florists value this plant highly, and distinguish it into four classes. First, *flakes*, of two colors only; the ground white, with a large stripe of scarlet, crimson or other color, going quite through the petals. Second, *bizarres* (signi-

fying odd, irregular); with flowers striped or variegated with three or four different colors, with irregular stripes or spots. Third, *picotees*, *piquettes*, or *piquetées*; edge fringed, usually having a white ground, with spots or small stripes of scarlet, red, purple, or other colors. To enumerate the varieties would be useless, says Green, as they are not permanent, and every country producing new flowers almost every year, which, though at first raising they may be greatly valued, in two or three years become so common as to be of little worth, especially if they prove defective of any one good property, and are turned out to make room for *new sorts*. I will therefore refer my readers to the lists of the florists and nurserymen, who import them or raise them from seed, who have a great variety under pompous names. The following are what the florists call the good properties of a carnation. The flower-stem should be strong, and able to support the weight of the flower in an erect position. The petals should be long, broad, and stiff, and easy to expand, or, as the florists term it, should make free flowers; the outer circle of petals should turn off gracefully, in an horizontal direction, and should be sufficiently strong to support the inner petals, which should diminish in size as they approach the centre. The petals should lie over each other in such a manner, as that their beauties can meet the eye at once; the middle of the flower should not advance too high above the other parts, and the edges should be entire, without fringe, notch, or indenture; the color should be bright and equally marked all over the flower; the flower, when blown, should be very full of petals, and the outside perfectly round; the stem should not only be strong, but straight, not less than thirty, nor more than forty-five inches high; the flower should not be less than three inches in diameter, and the petals well formed—neither so many as to appear crowded, nor so few as to appear thin; the lower or outer circle of petals, commonly called the guard-leaves, should be substantial, and rise perpendicularly about half an inch above the calyx; the calyx should be at least an inch in length, and sufficiently strong at the top to keep the bases of the petals in a close and circular body.

Propagation and Culture of the Carnation.—Having obtained a quantity of good seeds, prepare a proportionable number of pots or boxes, filled with soil mixed with rotten cow-dung, &c., incorporated well together; then sow the seed and cover them with about a quarter of an inch of the same compost, sifted finely; place the pots or boxes in an airy part of the garden; keep the soil moist, and shade them from the mid-day sun and heavy rains. The time for sowing the seed is about the first of May; in about twenty days the plants will come up, and, if kept clear from weeds and duly watered, they will be fit for transplanting about the first of August, at which time prepare some beds of

the same compost as they were sown in, in an open, airy situation; plant them in rows, about ten inches apart in the row, and twelve inches from row to row; during the winter, cover the plants with pine boughs, or any other light covering;—by these means they will generally flower the following summer. When they begin to shoot up their stalks to flower, they ought to be supported by sticks, and attentively looked after as soon as they begin to blow, to ascertain which of them promise to be good flowers; pull up all single and ill colored flowers, to allow the others more air and room; propagate the good ones by layers.

To Propagate by Layers.—After you have made choice of such shoots as you intend to propagate, and have loosened the soil round the plant, and, if necessary, raised it with fresh soil, that it may be level with the shoot intended to be laid down, strip off the leaves from the lower part of the shoot, and cut off the top of the leaves; make choice of a strong joint, the third or fourth from the crown of the shoot; then with a sharp knife make a slip close below the joint, about three fourths through the shoot, from the joint upwards; remove the swelling part of the joint where the slit is made, so that the part slit may be shaped like a tongue; for if the outer skin be left on, it will prevent their pushing out roots; then make a hole in the earth with your finger, just where the tongue in the shoot is to come; put into the hole about a tea-spoon full of silt, or fine sand, from the river; then with your finger and thumb gently bend the shoot into the earth, observing to keep the top as upright as possible, that the slit may be open; and, having provided forked sticks for the purpose, thrust one of them into the ground so that the forked part may take hold of the layer, in order to keep it down in its proper place; then cover the shank of the layer with soil, giving it a gentle watering, which should be repeated as often as it is necessary to promote their taking root. They will have taken root in about five or six weeks; cut them off from the parent plant, leaving about an inch of the stalk below the incision attached, and plant them in pots or beds, or in the borders, as you intend to bloom them. The soil suitable for the carnation and pink is rich maiden loam, to which add one third part of well rotted cow dung, and about one sixth part of drift sand from the side of the river, or other water courses; to this add a small quantity of air-slacked lime, say a quart to a barrow full, and about double the quantity of wood ashes; mix these well together several times in the autumn and spring, and use it the second season; protect your compost with boards from the drenching rains and the mid-summer sun.

To Propagate by Pippings.—The piping of the carnation is not attended with as much success as the piping of the pink. Our warm weather, during the months of July and August, is much

against this method of propagating the carnation; even in England not more than one half of the pipings that are put in ever take root; and were it not that some of the best sorts make very little and very short shoots, and are also very brittle, and difficult to propagate by layers, I should recommend that the piping of carnations should be discontinued: but, as the most difficult sorts to propagate are generally the most valuable, I will make a quotation from Paxton, which appears to me to contain the best information on this subject. Prepare a slight hot-bed in an eastern aspect, and as soon as the heat is moderate, lay on about six inches thickness of light mould, sifted finely. No piping should have less than two or three complete joints. Take off the cutting horizontally, just below the second or third joint, and merely cut off the leaves from the joint that is to be inserted into the soil, but leave the others entire, except the tops, which cut off square, a little above the centre of the crown of the shoot. After giving the earth of the bed a moderate watering, place on a hand or bell glass to mark the boundaries in which the pipings are to be planted; plant the pipings half an inch deep, and at least an inch and a half or two inches distant from each other. Many authors, and among the number Paxton, say, not more than an inch apart. This I conceive to be an error, and one of the causes of failure in piping: by crowding too many pipings under the glass, they hold too much moisture, and damp off. After you have put in all your pipings, give them a gentle watering, to fix the soil closely about them; let them remain uncovered until the leaves are dry; then place on the glasses, and press them gently down to prevent the admission of air; give the pipings a little morning sun, but always shade them when the heat becomes strong, which may be done by covering the glasses with mats. It is necessary, after the first week, that the glasses be occasionally taken off to admit air, but this must never be done when the sun is powerful, but rather in cloudy weather, or early in the morning. When the pipings are watered, never place the glasses over them until the leaves are dry, and then not without first drying the glasses, or mildew will be the consequence; and this must be continued until the pipings are well rooted, which will be in about six weeks, when the glasses may be removed altogether. When there are any very choice varieties, I would recommend that they be piped with tumblers, and put only one piping under each glass. I have almost invariably succeeded in this manner, when the piping in mass has been nearly, if not quite, a failure.

The Cultivation and Propagation of the Garden Pink (Dianthus plumarius).—The pink is more hardy than the carnation, and may be propagated with success, by dividing the roots in the spring; but as these divisions never make such good plants, or

bloom so fine as layers or pipings, it is a desideratum to raise new plants every year, either from layers or pipings, as one year old plants bloom very superior to those of any other age. When your pipings are prepared, make choice of a shady part of the garden; let the soil be light and sandy; put your pipings in after the same manner as recommended for the carnation, watering them with a fine rose watering-pot, until the soil is completely saturated; cover them with a hand glass, which should not be removed until they begin to grow; after that they may be exposed in the morning and evening, until they are able to bear the open air. The usual time for piping the pink is July; but I have succeeded much better when I have attempted it in September. Our dog-day weather is generally very much against the propagating of pinks by piping. The pink may be cultivated from seed in the same manner as the carnation, and in the same compost, with the addition of a little horse manure. Maddock gives the following as the *criterion of a fine pink*: "The stem should be strong and erect, and not less than twelve inches high; the calyx smaller and shorter than the carnation, but nearly similar in proportion, as well as in the formation of the flower, which should not be less than two inches and a half in diameter. The petals should be large, broad and substantial, and very fine fringed or serrated edges, free from notches or indentures; in short, they approach nearest to perfection when the fringe or edge is so fine as scarcely to be discernible; but if they could be obtained entire, it would be desirable. The broadest part of the lamina, or broad end of the petals, should be perfectly white, and distinct from the eye, unless it be a laced pink, that is, one ornamented with a continuation of the color of the eye round it, bold, clear, and distinct, having a considerable proportion of white in the centre, perfectly free from tinge or spot. The eye should consist of a bright or dark rich crimson or purple, resembling velvet, but the nearer it approaches to black, the more it is esteemed: its proportion should be about equal to that of the white, that it may neither appear too large nor too small."

The importation of the pink and carnation into this country, from England or from France, is very rarely successful: the close air and the scent of the ship is, in nine cases out of ten, fatal to the plants; hence these fine and odoriferous flowers are so little known or cultivated. We, indeed, find pinks and carnations of *a certain sort*, in almost every garden, but we rarely meet with a good one. I have met with specimens of the carnation, with high-sounding name, admired by its owner for its great size; but if the color of the petals had been green instead of "brick-dust-red," it would have readily passed for a cabbage-sprout. With such specimens, how can we expect to enlist the cultivated mind and tasteful admirer of nature, in the cultivation of this lovely

flower? The average price of carnations and picotees, in England, is about three shillings sterling per pair—pinks, one shilling and sixpence per pair, with a few exceptions for new and scarce varieties, which vary from five to twenty shillings per pair. I mention these facts, to contrast the prices asked and received by a gardener in this vicinity for one hundred plants of the carnation, warranted fine and of colors various!—Price paid, and I believe all that was asked, was *three cents each*! The result is, the purchaser is disgusted with his bargain; and if he had not had an opportunity of seeing better things, he might have exclaimed, in reply to the following line of the poet,—

“And pinks of smell divinest,”

Carnations of shapes and colors vilest.

To engage our friends in the cause of Flora, we should supply them with good things at a fair price. Taste, like truth, does not lie at the bottom of a well, nor is it confined to the rich or the poor, to the citizen or the yeoman, but is found in all countries, and among all classes of society.

In conclusion, dear Sirs, I would remark, that some good varieties of the carnation and the pink are to be found in the vicinity of Boston. A few years since, I did not know of a *first-rate* pink in the state of Massachusetts. We have now some ten to fifteen varieties of the best sorts. Mr. Hill, of Boston, has long been successful in the cultivation of the carnation; and it gives me pleasure to add, that some choice varieties are now under the care of Mr. Haggerston, at the seat of J. P. Cushing, Esq., at Watertown. A variety of fine pinks may be found at the Botanic Garden, Cambridge, under the care of Mr. W. E. Carter, and also at other gardens in the neighborhood. Among the best sorts cultivated in the vicinity of Boston, I would name Bow's Claudius, Major Shaw, Lady Cobbett, Lord Hamilton, Queen Caroline, Ford's fine seedling, Bow's Sir Isaac Newton, Navarino, Pettit's seedling, Hawkins's Beauty, a seedling raised by Col. Wilder, of Dorchester, and a seedling by the Messrs. Hovey, of Cambridgeport. The two latter I consider as possessing many, if not all, the properties which constitute a good pink. We may, therefore, hope soon to have more than one of our senses gratified; for

“Good scents do purify the brain,
Awake the fancy, and the wits refine.”

Yours, &c.

S. WALKER.

Roxbury, Aug. 16, 1836.

ART. VI. *Some Remarks on the Tree Pæony (Pæonia Moutan), including its history, introduction into England, the production of new seedling varieties, propagation, cultivation, &c.* By the CONDUCTORS.

THE tree pæony, and its varieties, *Pæonia Moutan* of botanists, are among the most splendid plants of which our gardens can boast. They have long been cultivated in England, and have there become quite common—so much so, that there are, probably, but few gardens that lay any pretensions to beauty, which are not adorned by the gorgeous blossoms of this fine tribe. In this country they are yet unknown to country gardens, and, perhaps, with the exception of the amateur and nursery collections in and about our principal cities, few if any plants are to be found. The comparatively high price which they have commanded, and still command, may be, perhaps, one cause why they are less often seen; but we apprehend a better reason is, that they are almost unknown.

The common double red pæony,—the ornament of almost every garden,—the treasured flower of the humble cottage—expanding its gay blossoms when but few other plants are in flower,—is too well known to need any description. When this was first introduced to England, it commanded an equally high price with that of the tree pæony at the present time, nor was it probably less admired; and although numerous varieties of it have been produced, there are but four or five that rival, and we may almost say, none that surpass it, in splendor. As common as this is, the idea of a *tree* pæony is quite novel; and there are but few persons who have seen one in bloom, who were not greatly surprised to hear of such a plant. To see the latter grown side by side with the former, is part of the object of this paper; for though at present quite rare, we hope to see the time when every garden will be enriched by its truly magnificent blossoms.

Long before the plants were introduced into England, they were well known from the botanical and other works upon China and Japan, as also from the repeated representations on Chinese porcelain and paper hangings, and in their paintings, &c. Many varieties are said to exist in China, which have not yet been introduced to England, and the London Horticultural Society possess several paintings of kinds different from those at present to be found in gardens. The Chinese are so selfish in regard to all the plants they possess, that, whatever price is offered, they are reluctant to sell them, and oftentimes deceive purchasers, by

selling the most common kinds for those quite rare; and this, too, when the rare ones, to us, are as abundant in their gardens as the more common. So often have purchasers been deceived in this manner, that, from the hundreds of plants that have been imported into England, as yet, according to most writers, only five or six are, in reality, dissimilar. Mr. Sabine, however, in the *Horticultural Transactions*, enumerates seven; and in the *Hortus Britannicus*, eleven Chinese varieties are registered.

Perhaps it may not be uninteresting to notice some of the names and colors of the varieties which are said still to exist in the Chinese gardens. That there are a great number we have no reason to doubt. The Chinese are great lovers of beautiful plants, and, although they do not possess a knowledge of vegetable physiology, sufficient to enable them to procure new kinds with any certainty, yet they spare no exertions to do so as far as their knowledge extends, as we may infer from the number of kinds of camellias and other plants which have been introduced. Various travellers have made great statements in regard to the varieties of pæonies they possess; too great reliance is, however, not to be placed upon them, for perhaps they have been deceived. The only good evidence of any such existing is to be derived from the drawings which have been made by good artists, and who have colored them accurately from actually growing plants. Of such, five were executed at Canton, in 1806, for the library of the East India Company, and copies of them have been made for the London Horticultural Society. Two of them are referable to the *P. papaveracea Banksiæ* and *rosea*. The third is called the *Tsú Moutan*, the first name indicative of the color, and has fine purple blossoms. The fourth is the *Pae Moutan*, with double white flowers. The latter is of slender growth; it is very scarce and highly esteemed. Mr. Sabine, in a paper in the *Horticultural Transactions*, to which we are indebted for the information in regard to the history of the tree pæony, states, that one of the double purple *Moutans* was purchased (about the year 1820) by an American captain, in order to be carried home. But we have never heard of such a variety, and it was, in all probability, lost on the voyage. The fifth drawing is called the *Hong Moutan Fa*, and is said to be a yellow (?) flower. It is said to have been taken from a plant which flowered in the house of a mandarin at Canton, in February, 1810. This, however, was not believed when this statement was published, and the existence of a yellow variety is considered very doubtful. Stories are current at Canton, that they have them of all colors, even blue and black (?). Mr. Main, who went out to China in the year 1792, for Gilbert Slater, Esq., states, in a late paper, entitled "Reminiscences of a Voyage to and from China," in *Pax-*

ton's *Horticultural Register*, that he selected a yellow with two other varieties, to bring out with him ; but we find no further account of it.

The London Horticultural Society, under the direction of Capt. Reeves, had six drawings executed in China, which are to be depended on for their accuracy. Two are referable to the *papaveracea* and *p. Banksie*. The third is a semi-double white, of no great beauty: the fourth a double purple, similar to the one above-named: the fifth a small purplish red, with pale edges to the petals: the sixth a very double pale red, with small inner petals. The society also possesses two other paintings, copied from Chinese originals in the collection of Lady Banks, which are supposed correct; one is a deep rich red, the other a white flower tinted with green. In a work entitled *Mémoires sur les Chinois*, there are several pages devoted to the history, native habitats, and other particulars respecting these plants. From these, which Mr. Sabine partly embraces in his account, we learn that they are of great antiquity in gardens in the north of China, and supposed to have originally been found growing wild on the mountains in the province of Ho-nan. They were subsequently cultivated in the imperial gardens of Kai-fong-fou, in Ho-nan; but they flourish better in the province of Hou-Kouang, from whence they are sent to Peking, Canton, and other parts of the empire. Mr. Main, in the paper before alluded to, states that they are natives of, and much cultivated in, the province of Nankin. It is also represented that the Chinese have plants of various heights, from very dwarf ones to those of twenty or more feet high, and that they produce their flowers at different seasons; some in winter and others in autumn. This account is undoubtedly true, in regard to the native locality of the plants; as their habits would lead us to suppose that they were of Alpine origin, subject to being buried in deep snows during winter, and in spring breaking into foliage rapidly, and making strong short shoots in the early part of the season. Some writers, among whom are Thunberg and Loureiro, referred all the pæonies which they saw to the *P. officinalis*. From China they were introduced to Japan, where they are extensively cultivated.

The introduction of the plants to England, from China, is said to be attended with considerable difficulty; the length of the voyage being so great, that nearly all the plants die on the way. But we are inclined to think that the loss of the plants is more to be attributed to the state they are in, when sent from China, and the mode of packing, than from the length of the voyage. Mr. Main states that the plants are brought to Canton from the province of Nankin, and, when done flowering, for the most part thrown away. He also states, that he turned some out of the pots which had just arrived, and found them "most barbarously

used." It appeared that they had been raised in the open ground, in a strong alluvial soil, and had all their strong thick woody roots *docked short off*, to fit a small pot, for the convenience of carriage. Undoubtedly most of the plants which are imported are in no better condition than these; and this is sufficient to ensure the death of almost any plant during a voyage of three or four months. The plants are, for the most part, thrown away by the Chinese when they have blossomed once, as it is not believed they will flower again. At the time they flower, the officers of the East India Company are absent at Macao, to which place they generally resort after the sailing of the ships, so that they have no opportunity to see the plants themselves when in bloom, but rely upon the native residents at Canton. This circumstance accounts for the uncertainty which exists in regard to the number of the varieties, and the dissimilarity in color of the flowers.

The best account of the *Pæonia Mou'tan* which has been published, was by the late Mr. George Anderson, in the *Transactions of the Linnean Society*. In that paper, which forms part of a monograph of the tribe, written in the year 1817, he adopted the single-flowered plant as the type of the species, and the two others then known and described as species, he considered as only varieties. In this he was some time afterwards (1824) followed by De Candolle, who adopted his order of the plants; and subsequent writers have concurred with this method. The specific name, *Mou'tan*, was first given by Dr. Sims, in 1808. It was called by one or two writers, *P. arborea*; but the former name is now established, and we only occasionally see the latter applied in catalogues or minor works on gardening.

(To be continued.)

ART. VII. *Notices of new and beautiful Plants figured in the London Floricultural and Botanical Magazines; with some Account of those which it would be desirable to introduce into our Gardens.*

Edwards's Botanical Register, or Ornamental Flower Garden and Shrubbery. Each number containing eight figures of Plants and Shrubs. In monthly numbers; 4s. colored, 3s. plain. Edited by John Lindley, Ph. D., F. R. S., L. S., and G. S., Professor of Botany in the University of London.

Curtis's Botanical Magazine, or Flower Garden Displayed, containing eight plates. In monthly numbers; 3s. 6d. colored, 3s. plain. Edited by William Jackson Hooker, L.L. D., F. R. A., and L. S., Regius Professor of Botany in the University of Glasgow.

DICOTYLEDONOUS, POLYPETALOUS, PLANTS.

Ternstromiaceæ.

CAMELLIA.

C. reticulata is figured in *Paxton's Magazine of Botany* for June. This now tolerably well known and splendid species, though introduced into England as long since as 1824, according to Loudon's *Hortus Britannicus*, is yet rare in collections in this country; and the price at which good plants are sold will probably prevent their being very rapidly introduced into gardens. It has never yet flowered but in three or four collections in this country; in our vicinity in only two. In the spring of 1835, a small plant in ours opened a very handsome blossom; subsequently, and during the last season, a plant in the collection of Mr. Wilder expanded two or three blossoms, and the same plant which flowered with us the previous season, also opened a fine one the past spring. They are extremely gorgeous, and quite different from the common varieties. In general appearance, the flower much more resembles the blossom of the *Pæonia Moutan* than any other of the species or varieties of camellias. It is a very strong growing kind, and the flowers are of exceedingly large size, sometimes measuring six inches across. It may be truly said to be the most magnificent of the whole genus.

This species requires rather a stronger soil than the *C. japonica* and its varieties. This species was introduced from China by Capt. Rows, in compliment to whom the English name was given—Capt. Rows' Camellia. We hope to see this magnificent plant in every collection: one cannot be called complete, when one of its richest ornaments is wanting.

Rosaceæ.

CRATÆGUS

Crus-galli var. *ovalifolia* L. *Oval-leaved* cockspur Thorn. A handsome, hardy, small tree; with fruit of a dull pale red color; supposed of garden origin. Bot. Reg., 1860.

Synonymes: *Mespilus Crus-galli* Poir. *M. linearis* Ehrh. *Crataegus lucida* Wangerh. *C. ovalifolia* Hornem.

The species, of which this is a variety, grows indigenous throughout our woods and hedges, from the Carolinas to the Canadas, and its pale red berries are a pretty ornament to our autumnal scenery. Two varieties are common in the English gardens, distinguished as the broad-leaved and the pyracantha-leaved. This variety is, however, less known to the nurseryman, and, consequently, has been described as a species. Mr. Loudon, in his late excellent work, the *Arboretum Britannicum*, in which nearly all the cratæguses are figured, has looked upon it

as a mere variety of the *C. Crús-gálli*, and so given it in his enumeration of the species and varieties. In this he is seconded by Dr. Lindley, who has here figured it under the same name. We are much of the opinion of Mr. Loudon, which he has frequently expressed in his *Magazine*, that many plants which are now known and registered as species, are mere varieties: the least variation in plants has been considered sufficient to constitute a species. In regard to the genus *Cratægus*, we believe much confusion exists; but we hope the labors of Mr. Loudon, which have been indefatigable in regard to this fine tribe, will tend to lessen these difficulties in a great degree. (*Bot. Reg.*, June.)

prunifolia Bosc. Plum-leaved Thorn. A handsome small tree; with deep crimson berries. A native of North America. *Bot. Reg.* 1868.

Synonyme: *Mespilus prunifolia*. Poir.

“Apparently a distinct species of thorn in the way of *C. Crús-gálli* var. *ovalifolia*, from which it is readily known by its shaggy flower-stalks and its less pear-shaped fruits, each of which contains two instead of three stones.” In its mode of growth it resembles the broad-leaved *cratægus*, but is a taller tree. During summer the tint of its foliage is a much richer green, and in the autumn assuming a deeper hue of crimson. The haws are of a brilliant crimson, and appear in clusters of five or six each. It does not lose its leaves until very late in the season. It is a native of this country, though we are not aware of its exact locality; probably in the middle or southern states. Introduced into England about twenty years since. (*Bot. Reg.*, June.)

Leguminaceæ.

KENNEDYA.

macrophylla Lindl. Large-leaved Kennedy. A beautiful green-house twining shrub; growing to the height of eight or ten feet; flowers of a purplish blue color; appearing in the summer season; a native of Swan River, in New Holland. *Bot. Reg.* 1862.

A handsome species of the pretty genus *Kennedy*: “introduced by Sir James Sterling, from Swan River, in New Holland.” It is stated, “in many respects, so much like *K. Comptoniana*, as to render it doubtful whether it is more than a variety of that species. It appeared, however, to differ, in being altogether a more vigorous plant; its leaf-stalks were as long as the leaflets, and not shorter; the reticulations of its leaves were more coarse.” All the species are desirable, and when trained to the columns or rafters of a green-house, have a very beautiful appearance. A pretty mode of training and managing such plants is practised in the garden of Mrs. Lawrence, “by raising the stems round and round to stakes fixed into the sides of the pot, so that the plant is compelled to grow round itself. The result of this is, the collection into the compass of a bush of hundreds of clusters of flowers, which would otherwise be scattered over the roof of a green-house, and too far removed from the eye to enable the beautiful

form and color to be distinctly seen." The specimens from which the drawing was taken, were received from the garden of Robert Mangles, Esq. at Sunning Hill, in the course of the last summer. (*Bot. Reg.*, June.)

Silenaceæ.

LYCHNIS (*Lychnis*, a lamp; said to have derived its name from this, because the cottony leaves of some species were employed as wicks for lamps.)

Bungeana Fischer MSS. Bunge's *Lychnis*. A handsome frame plant; growing a foot or more in height; flowers of a brilliant scarlet; appearing in August; introduced to England last season from Petersburg; propagated from cuttings. (*Bot. Reg.*, 1864.)

Synonymæ: *Agrostemma Bungeana* Don in *Sweet's Brit. Flow. Gard.* t. 317.

"A very beautiful species." The flowers are single, and of a beautiful scarlet; the petals with several deep incisions upon their margin: flowers solitary: leaves ovate, lanceolate, hairy. In England it is not quite hardy, suffering both from the dryness and the coldness of the climate: a cool green-house suits it best. Probably in our climate it would require similar treatment. It should be fully exposed to the light, or the brilliancy of the flowers becomes much impaired. It is propagated freely by cuttings. The drawing was made from the garden of the London Horticultural Society, in August, 1835. (*Bot. Reg.*, June.)

DICOTYLEDONOUS, MONOPETALOUS, PLANTS.

Cinchonaceæ.

MANETTIA (So called after *Xavier Manetti*, a professor of Botany at Florence, who published a work on Italian Fruit Trees, in 1751.)

cordifolia De Cand. Heart-leaved *Manettia*. A beautiful hot-house climber; running four or five feet high; with flowers of a scarlet color; appearing in June; a native of Brazil; propagated by cuttings. (*Bot. Reg.* 1866.)

Described as follows:—stem herbaceous, twining: leaves ovate, cordate at the base, and acute: peduncles axillary, one-flowered. This species is a beautiful hot-house climber, with scarlet, tubular, trumpet-shaped flowers, somewhat pendant, and appearing in great profusion in the month of June. It is a valuable addition to the stove, and should enrich every collection. It is "a native of hedges and copses and the skirts of forests in Brazil, near Villarica, and elsewhere in the Province of the Mines, where it is accounted a potent medicine in cases of dropsy and dysentery." It is easily grown from cuttings. (*Bot. Reg.*, June.)

Portulacææ.

We have, at this time, a patch or two of *Calandrinia speciosa*, displaying its brilliant blossoms in the sandiest and poorest soil of our flower border. About mid-day, whenever the sky is clear, and the sun shines with full force, the corollas expand and the flowers are one dense mass of beautiful crimson, reposing on the dark green and velvety foliage of the plant. In dull weather, and also in the morning and evening of every day, the blossoms

do not open, and the plants have the appearance of small weeds. But the moment the sun's rays glitter forth in full power, they immediately open, and continue expanded for two or three hours. It should be in every garden : unless the seeds are sown in a *very poor* soil, the plants run all to foliage.

Convolvulacæ.

IPOMÆA.

In *Paxton's Magazine of Botany*, for June, a species called *rùbra carùlea* is figured. It requires the heat of a stove to flower it to perfection. The flowers are very large, somewhat similar in shape to the common species, and of a rich purplish blue color. The buds before they open are white, with a tint of rich red. Seeds of this species were collected by Mr. Samuel Richardson, in the province of Guanaxuato, in Mexico, and sent to England. It is stated to make a very pretty show, trained up the rafters or other parts of the hot-house or stove, where it can be easily seen. It flowers freely, and grows easily in equal portions of loam and peat, with a little well rotted dung. Perhaps this species would flower well in the open ground, treated in the same manner in which the *Cobæa* is usually grown.

Polemoniacæ.

GILLIA (So called after *Dr. Gillis*, a Spanish botanist.)
tricolor, three-colored, in allusion to the three beautiful tints of its corolla.

This comparatively new and pretty species, from California, ought to be particularly recommended to those admirers of floral beauty, whose taste or limited opportunities lead them to the cultivation of plants in pots. For two months past, a few plants of this species have every day been delighting my eyes with a profusion of its elegant corols and dark green delicate foliage. The soil should be a light rich vegetable mould and sand. When suffered to hang negligently over the sides of a pot, the free and unrestrained elegance of nature, displayed in its economy, is particularly interesting. It bears the confinement of a room better than almost any other plant, and I am led to think, from my specimens, that the color of the flowers are much darker and deeper than when grown in the open air. For a winter plant, it must be a little flowering gem : and one more item may be added to its merits, that it attracts the favorable notice and admiration of the fairer sex, with whose charms it so pleasingly vies. Its specific name is a happy allusion to its colors, which are curiously blended, and the genuine and specific names are euphoniously connected, in our recollection, with the semperflorent pansy (*Viola tricolor*). Well can I remember with what eagerness, so common to children towards this latter, their favorite flower, have I sought for its golden and purple blossoms

peeping forth from under the snow; and to recall those happy moments, have given my new favorite, the three-colored gilia, an envied situation near a patch of *heart's-ease*, which the skill and praiseworthy assiduity of modern floriculturists have rendered so conspicuously rich and splendid.—*R.*

Hydrophyllaceæ.

NEMOPHILA.

We have now in beautiful bloom, in our garden, several plants of the *N. insignis*. It is a fine annual, trailing on the ground, and covered with a profusion of white and blue flowers. Planted in patches, it would present a beautiful display all summer, and would be valuable to plant with petunias and eschscholtzias. It is yet quite rare, but, as it seeds tolerably freely, no doubt it will soon become as common as other annuals.

Iridaceæ.

We have lately had in flower several beautiful species of *Ixia*, *Gladiolus*, *Peyroúsia*, *Hesperántha*, and other Cape bulbs, which we received from the Mass. Horticultural Society, and which, with others, formed part of the liberal donation of the Baron LUDWIG. *Ixia stricta*, *flexuosa*, and *viridiflora* are beautiful plants, particularly so the latter. *Gladiolus blándus* is a most charming species: the petals are of a yellowish white, the three upper ones elegantly pencilled with bright pink, or rosy red. The specimens were not very large, and only produced spikes with three or four flowers; but we presume, if grown strong, they would produce eight or ten. *Peyroúsia falcata* is a small but delicate species, with spikes of sky-blue flowers, about six inches high. A species of *Hesperántha*, but unknown, was also very fine. The bulbs were all weak from the length of time they were out of the ground; but when they have been grown strong, their flowers will be much more beautiful.

Gladiolus natalénsis is now throwing up its tall spikes of vermillion, yellow, and green flowers in abundance, in the open border. It should be cultivated in every collection.

Orchidaceæ.

HABENARIA (From *kabena*, a rein or thong, in allusion to the long strap-shaped spur.)
procéra *Lindl.* Tall *Habenaria*. A stove plant; growing two feet high; with greenish white flowers; appearing in August; propagated by offsets. *Bot. Reg.* 1858.
Synonyme: *Orchis procéra* *Swartz.*

A "rare species," long since found, and introduced into *Perseus's Synopsis*, since which time nothing has been heard of it, until it flowered in the splendid collection of the Messrs. Lodiges, at Hackney. It is a native of Sierra Leone. It requires the heat of a damp stove to grow it well. The genus *Habenaria* consists now of upwards of eighty species, and many more, it is supposed, will have to be added to it. (*Bot. Reg.*, June.)

We shall at some convenient opportunity call the attention of our readers to the cultivation of our hardy native orchideous plants, among which the genus *Habenaria* stands conspicuous. Several species grow in this vicinity, and are highly worthy of introduction into every garden.

CATTLEYA

labiata Lindl. *Crimson-lipped Cattleya*. A splendid stove epiphyte; growing about a foot high; with crimson and lilac flowers; appearing in October; a native of Brazil. Bot. Reg. 1859.

This splendid plant has been cultivated in England for some time, and has been figured in several botanical periodicals. These plates are, however, Dr. Lindley states, deficient in the richness of color, which is so peculiarly characteristic of this species. The flowers appear on stems, in clusters from four to six each, "and when in this state," says Dr. Lindley, "there is certainly no plant of which I have any knowledge, that can be said to stand forth with an equal radiance of splendor and beauty. For it is not merely the large size of the flowers, and the deep rich crimson of one petal contrasted with the delicate lilac of the others, that constitute the loveliness of this plant; it owes its beauty, in almost an equal degree, to the transparency of its texture and the exquisite clearness of its colors, and the graceful manner in which its broad flag-like petals wave and intermingle when they are stirred by the air, or hang half drooping, half erect, when at rest and motionless. It requires the heat of a damp stove to flower it to perfection. The drawing was made from the garden of the Horticultural Society. (*Bot. Reg.*, June.)

MORMODES Lindl. (From *mormo*, a frightful looking object, a goblin, in allusion to the strange appearance of the flowers.)

atropurpurea Lindl. Dark purple *mormodes*. A curious stove epiphyte; growing six or eight inches high; with dark purple flowers; appearing in December. A native of the Spanish Main; introduced in 1834. Bot. Reg., 1861.

A very singular plant, constituting a new genus. The flowers appear in dense lateral racemes, and are of a dark rich purple color. The leaves are pale green. It flowered for the first time in the collection of John Willmore, Esq., near Birmingham, in December last. It requires the same treatment as the *catasetums*, &c. (*Bot. Reg.*, June.)

TRICHOPIHLIA Lindl. From *trichos*, hair, and *pilion*, cap. The anther of this genus is concealed below a cap surmounted with three tufts of hair.

tortilis Lindl. Twisted-petalled *Trichophilia*. A beautiful stove epiphyte; growing eight or ten inches high; with white and crimson flowers; appearing in January; a native of Mexico; introduced in 1835. Bot. Reg., 1863.

"A beautiful and highly curious plant," also forming a new genus. The flowers are sessile and horizontal, and appear at the base of a leaf. The petals, five in number, are singularly twisted: the labellum is bell-shaped, being curiously rolled round the column, and is spotted somewhat in the manner of a foxglove, with rich crimson. (*Bot. Reg.*, June.)

We certainly hope that the fine places in this vicinity will soon

boast of their collection of epiphytes. No plants would more delight, either by their beauty or by their singularity, than this highly interesting tribe. We look forward with much pleasure to the time when they will be generally grown; and we cannot but believe that the liberal proprietor of such an elegant residence as Belmont Place, or such an amateur lover of plants as Mr. Knevels, of Newburgh, N. Y., will soon be induced to add these to their already extensive collections.

DENDROB'BIUM

macrostachyum Lindl. Long-spiked Dendrobium. A pretty stove epiphyte; growing one or two feet high; with yellow or pale sulphur flowers; appearing in June; a native of Ceylon. *Bot. Reg.* 1865.

Less beautiful than several other species, but requiring the same treatment. The flowers appear in threes on a pendulous rod-shaped stem. Dried specimens of this species were sent from Ceylon to Dr. Lindley some years since. In looking over these, he found a small blanched portion of a root, or pseudo bulb; this was fastened to the wall of a damp shady stove, in the garden of the London Horticultural Society, where it soon turned green, and began to grow. It was carefully tended, and grew into a plant, which was separated and distributed. From one of these plants this drawing was made last June. (*Bot. Reg.*, June.)

EPIDENDRUM

armeriacum Lindl. Apricot-colored Epidendrum. A stove epiphyte; growing about eight inches high; with orange-colored blossoms; appearing in June; a native of Brazil. *Bot. Reg.* 1867.

Exhibited for the first time at one of the splendid displays of flowers in the London Horticultural Society, last season, where "in the midst of the dazzling scarlet or pink of various kinds of *Cacti*, and surrounded by the brilliant pluming of Chinese azalea flowers, that weighed down their graceful branches, which really seemed as if they were proud of their lovely burden, from a basket of humble moss, a little tuft of stems of this species was seen to rear its modest head, as if in hopelessness of attracting notice in so gay a company." This description would undoubtedly be considered as greatly exaggerated by those who are only fond of showy flowers; but "the pleasing tint of its apricot-colored petals, the elegant form of their slightly nodding or even drooping clusters," will compensate for the absence of its "gaudier rivals." The flowers appear in dense drooping racemes, and among the curious forms of the epiphytes, this must have a fine effect. Imported and flowered by the Messrs. Rolinsons of Tooting. (*Bot. Reg.*, June.)

Skinnéri Bateman MSS. Mr. Skinner's Epidendrum. A stove epiphyte; with greenish-white flowers; appearing in July. *Bot. Reg.* 1870.

"Not a pretty species," but desirable in a collection; introduced in 1834, and flowered for the first time in July, 1835. (*Bot. Reg.*, June.)

MAXILLARIA

aromatica Graham. Aromatic Maxillaria. A fragrant stove epiphyte; growing six inches high; with yellow flowers; appearing in May; a native of Mexico. Bot. Reg. 1871.

"A fragrant species, breathing cinnamon and sweet spices." Introduced as long since as 1826, and quite common in collections. The flowers are not unhandsome, but the species is valuable for its delightful fragrance. It flowers abundantly in the month of May. (*Bot. Reg.*, June.)

CRYBE *Lindl.* (From *crypto*, to conceal, in allusion to the manner in which the column is hidden by the floral envelopes.)

rosea *Lindl.* Pink-flowered Crybe. A stove epiphyte; growing a foot or more in height; with rose-colored flowers; appearing in June; a native of Mexico. Bot. Reg., 1872.

Another new genus formed by Dr. Lindley. This species requires the same treatment as the *bletias*, from which we infer it is a terrestrial plant. The flowers appear four or five in number, on a slender stem, and remain partially closed, from whence its generic name. The genus is stated to be nearly allied to our *arethusas*. It blossomed in the superb collection of the Messrs. Loddiges. Highly worthy of introduction. (*Bot. Reg.*, June.)

ART. VIII. Calls at Gardens and Nurseries.

Amateur Garden of Mr. S. Sweetser, Cambridgeport.—August 23. Dahlias promise an abundant bloom this season, if we have no early frosts; their cultivation is much better understood now than a year or two since. In Mr. Sweetser's garden the plants have shown a profusion of blossoms every season: last year, when but few persons succeeded in flowering them well, there was a good display until the plants were destroyed by frost. The reason of this was not at first apparent; for dahlias grown in the immediate neighborhood, and on a soil seemingly the same, did not produce a flower; nor did the plants, many of them, even grow. Upon a little reflection, however, Mr. Sweetser came to the conclusion that it was the *depth* and *looseness* of the soil, rather than the situation or any thing else, that caused his plants to bloom so finely; insects, the situation,—too much sun, and too little shade,—the want of water, &c., have been the arguments brought forward to prove that dahlias would not flower well except when under peculiar circumstances. But we agree fully with Mr. Sweetser, that in whatever situation dahlias may be placed, they will flower well if the soil is *deep* and *light*. The soil of Mr. Sweetser's garden is deep and sandy: formerly it was quite shallow, with a sandy sub-soil: but in order to make it deeper it was trenched over; more soil was then added by filling in, so that it is now not only deep but light. In dry weather the plants need water.

The collection here is very excellent—probably one of the best in the vicinity; and we anticipate a rich treat when all the varieties are in bloom. In the green-house we noticed a great quantity of double Chi-

na asters in pots, profusely covered with bloom; we were struck with the beauty of these, and it occurred to us how ornamental green-houses might be made during the summer season by a little care, and not the dirty and unsightly places we so frequently see. If you visit an amateur or nurseryman in the summer, and inquire for a glance at his green-house, he tells you there is nothing in it at this season—that the plants are mostly placed in the open air, as it is much better for their health; and true enough, you find it as he says,—a few pots here and a few pots there, some plants perishing for want of water, and some running and overtopping several others—all confusion. Might it not be made a place of interest by filling it with pots of asters, balsams, globe amaranthuses, petunias, jilliflowers, coxcombs, and similar showy plants?—removing all unsightly ones, and taking proper care of those requiring it? With the nurseryman this cannot always be expected; but with the amateur it should never be forgotten. Mr. Sweetser has a fine collection of the *Cacti* tribe, including some new sorts, among others the *Echinocactus Eyrièzi*. The method of propagating plants by cuttings, as recommended at page 265, we here saw under experiment, and it succeeds very well. A pot of camellia cuttings put in by the old method, and one by the former, standing side by side, showed the excellence of the mode. Mr. Sweetser's collection of camellias is quite large, and the plants promise a good bloom the coming winter.

At our Garden the dahlias are now showing abundant bloom: several new and fine varieties have expanded. Among the parti-colored ones, Widnall's *Venus*, in our opinion, stands pre-eminent. Brewer's *Scarlet Perfection* is a superb flower; but there are so many of the new ones that are fine, that it would be superfluous to enumerate them. The asters are also showing fine flowers; *Gilia tricolor*, several patches of it, is charmingly beautiful. *Eschscholtzia crœcea* has been in bloom all summer. *Petunia phœnicea* and *intermedia* are brilliant with their fine purple blossoms. We have elsewhere noticed *Nemópila insignis*. *Mãdia élégans* is handsome in the morning, before the sun curls up its petals. *Mãlope grandiflora* and many other fine annuals are also brilliant with their elegant blossoms.

MISCELLANEOUS INTELLIGENCE.

ART. I. *General Notices.*

On the Origin of Weeping Trees.—Fascicles, or bundles of shoots, are often observed on trees, which resemble a bird's nest at a distance, but when examined they prove to be a cluster of small twigs. Such bundles are observed on different trees, but more frequently on the white or common birch tree, (*B. étula álba*, L.) In the year 1808, I observed such a bundle on a *cratægus*, *mespilus*, and *oxyacantha*, and grafted young thorns with them, which, in two or three years, produced beautiful branches. About the same time I observed such a bundle on *Ulmus campêstris*, the eyes of which were budded on healthy young trees, and every one produced a long hanging shoot. According to this observation, it would be very easy to procure a large collection of drooping

or weeping trees. Our gardeners, however, multiply no species so numerous as the *Fraxinus excelsior*, var. *péndula*; which variety often retains its hanging character when raised from seeds. We possess several such trees of about ten feet in height, which were raised from seed of the original tree, obtained in 1780 from a nurseryman, who found it a few years previously to that in the neighborhood of Newmarket, in Cambridgeshire. (*Wm. Anderson, in the Gard. Mag.*)

Cultivation of Canna Achira, or *C. edulis*, as a substitute for the *artion* root.—From what you say in your Magazine, and the testimony of Signor Conte Compton, I wrote a paper, suggesting to the Georgofili Academy at Florence to try to cultivate it in the marshes which are occasionally overflowed by the sea. The secretary of that establishment informed me that, according to my proposal, they had planted and cultivated the achira in the open air; and that the result was very successful, as he thus writes:—"The four tubers which I planted have produced more than twenty of a large size. I have tasted them, and they are excellent; the juice being sweet and agreeable. I have also extracted the fecula, and find it resembles that of the potato, and of the *Maránta arundinæa*; and I have calculated that it produces at the rate of eight to a hundred." This year I have also grown a considerable number of tubers. When the extreme cold was over, I planted them in the open air early in the spring, in a rich soil exposed to the sun, not failing to water them abundantly every day; and by these means the stems grew to the height of about nine feet, flowered freely, and produced abundance of seed. When the cold set in, which, this year, was a month earlier than usual, because on the 13th of this month the thermometer was at 3° of Reaumur, and on the 14th and 15th there was a heavy fall of snow, I dug up the ground, and found that the tubers of the achira had produced abundantly, and that those of a moderate size weighed four ounces. I had some boiled, and some baked: I found by both the methods that they were agreeable to the palate. I had also a little of the fecula prepared for the table, and found that it tasted like a mixture of the potato and the beet root. I had, also, some tubers fried, and found them excellent. This year it will become better known in the country, and I hope its usefulness will be proved. The stems and leaves might, probably, serve as food for cattle, if prepared by steam.--(*Guisepe Manetti, in Gard Mag.*)

Ornamental Gardening in Syria.—The following is an extract from a letter lately received from J. W. Farren, Esq., the British consul at Damascus, by Wm. Wingfield, Jun., Esq., son of Wm. Wingfield, Esq., of Theobald's, Cheshunt, whose lady, Mrs. Wingfield, being possessed of an excellent taste for ornamental gardening, and being, at the same time, an ardent admirer of the beauties of Flora, has had the honor of first introducing the dahlia into that part of the world; and who, in order to meet the wishes of the consul, has again very lately forwarded a package, containing a variety of articles both in seeds and plants, such as will, no doubt, be received with much pleasure. The extract is as follows:—"I have often intended to write you a few lines of acknowledgment and thanks for the very beautiful dahlias you sent us; and you will be gratified to learn, that they have flourished in perfection; and that, while you are the first to introduce that beautiful flower into Syria, it has ornamented the fair foreheads of all the Circassians in the richest harems of Damascus; has decked the bridal garment, and publicly ornamented the tomb. Indeed, you have no idea of the enjoyment your kind attention has been the cause of. The house in which we reside is really an Oriental palace; courts, gardens, terraces, marble pavements, fountains, and jets-d'eau, &c.: and you can scarcely have an idea of the luxury of these mansions. We are hav-

ing one of the gardens laid out in the English style: the dahlias have been taken up; and, in replanting them, we shall follow the directions given by you. You must not think me inconsiderate in saying that we look forward with pleasure for the pelargoniums, and other seeds and roots, which we hear you had intended for us. You know what a scarcity of choice flowers and plants there is in Syria, and what a treasure they are here, and how admired by the natives. I have just had some bulbous roots from France of the double orange lilies, tulips, &c., which I hope to cultivate. You recollect our pelargoniums (those sent over by Mrs. Wingfield): there is no other sort in the country; nor is there such a flower as the moss rose in Asiatic Turkey."

While it appears that the splendor of the Orientals at Damascus is not inferior to many other places in the East, and that the gardens, in point of extent and scenery, may be imposing, yet it is evident that floriculture is at a low ebb; while, at the same time, the soil and climate in Syria are such as to induce us to believe, that no country in the world can offer greater facilities for the growth and perfection of a vast number of the most splendid flowers now known, which may be inferred from what the country in other respects produces; as it is said that "it abounds in oil, corn, and several sorts of fruits, and peas, beans, and all kinds of pulse and garden stuff," and that there are to be seen "the finest plains and pastures in the world." Should, therefore, this spirit for floriculture at Damascus continue to be indulged, and be fostered by the kind liberality of individuals in Europe, even Syria may shortly become possessed of the beauties of Flora in many of her richest varieties.—(*Gard. Mag.*)

Heating Stoves by Steam not a new Invention.—The following extract is taken from Sir Hugh Platt's *Garden of Eden*, edit. 1675, which was first published in 1600, under the title of *Flora's Paradise*:—

"*A Stove for all Vegetables, good and cheap.* And for the keeping of any flowers or plants abroad, as, also, of the seeds thus sown within doors, or any other pots of flowers, or dwarf trees in a temperate heat, with small charge, you may perform the same by hanging a cover of tin or other metal over the vessel wherein you boil your beef, or drive your buck, which, having a pipe in the top, and being made in the fashion of a funnel, may be conveyed into what place of your orchard or garden you shall think meet; which room, if it were so made as that, at your pleasure, it may become either close or open, you may keep it in the nature of a stove in the night season, or in any other cold weather; and in the summer time, you may use the benefit of the sunbeams, to comfort and cherish your plants or seeds. And this way, if I be not deceived, you may have both orange, lemon, pomgranet trees, yea, peradventure, coloquintida and pepper trees, and such like. The sides of this room, if you think good, may be plastered, and the top thereof may be covered with some strained canvass, to take away at your pleasure. *Quære*, if it be best to let the pipe of lead to breath out at the end only, or else at divers small vents which may be made in that part of the pipe which passeth amongst the stove. I fear this is but a meer conceit, because the steam of water will not extend far; but if the cover to your pot be of mettel, and made so close that no air can breath out saving at the pipe, which is sodred or well closed in some part of the cover, then it seemeth probable, this cover may be put on after the pot is scummed."—(*Garden of Eden*, part ii. p. 17—*Ib.*)

Distribution of the order Rosaceæ in India.—Two other species of *Poténtilla* are found on the Neelgherries, with a *Cotoneáster* *Fragária*, and species of *Rûbus* and *Photinia*. Of this last genus, species are also found in the mountains above Silhet and Pundua, and extending further north, with a species of *Eriobótrya* in Nepal; making these genera com-

mon to the Himalayas and to China. A *Raphiölepis* is also mentioned in India, but it does not appear to extend beyond China or Cochin-China. A species of *Eriobötrya* is said to be found in Persia.

In addition to these, in the northern as in the southern parts of the Himalayas, there are numerous species of *Rosaceæ* belonging to such genera as are found in Europe, Siberia, the Altai Mountains, China, Japan, and North America; and from Caucasus to the Hindoo Khoosh, on the ramifications of which, and in the valleys they include, some, as the *Pomaceæ* and *Amygdaleæ*, appear to have their favorite resort. The genera of which species are found in the Himalayas are, *Amygdalus*, *Pérsica*, *Armeniaca*, *Prünus*, *Cérasus*, *Spiræa*, *Neillia*, *Gènum*, *Sivérsia*, *Rùbus*, *Dalibárida*, *Fragària*, *Potentilla*, *Sibbáldia*, *Agrimónia*, *Sanguisórba*, *Ròsa*, *Cratægus*, *Cotoncéster*, *Cydònia*; and of *Pyrus*, species of the sections *Pyráphorum*, *Málus*, and *Sórbus*. Of these, *Neillia* is alone peculiar to these mountains. *Sivérsia* is interesting, as found on the Alps, in Kamtschatka, in Melville Island, and in the Himalayas, on such lofty mountains as Choor, Kedarkanta, and Gossainthan; and *Dalibárida*, in these mountains, in North America, and the Straits of Magalhaens. Though the *Rosaceæ* are chiefly confined to the northern hemisphere, yet the southern is not without them, as a *Gènum* is found in the last mentioned straits; a *Fragària* and *Rùbus* in the Andes and Peru; a *Cratægus* and *Potentilla* in Chili; and, though not to the south of the line, a *Gènum*, *Rùbus*, and *Amygdalus*, in Mexico; and a *Cérasus* in the West Indies; appearing to indicate that, where any similarity of climate exists, representatives of genera and families may be found, of which the greater numbers exist in very distant regions.

With respect to species which, independent of those yielding the well known fruits, are common to these mountains and other parts of the world, *Pyrus baccàta* may be mentioned, which, common in Siberia, was procured by Dr. Wallich from Kemaon, and found by myself on Kedarkanta. Of the spiræas, one is near, if not identical with, *S. calòsa* of Thunb.; *S. chamaedrifòlia* Linn., and *S. kamtschatica* Pall., allied to *S. Ulmària*, found in Siberia, are also so in these mountains. *S. triternàta* approaches *S. Arúncus*; and *S. Lindleyàna* is like *S. sorbifòlia*. *Agrimónia nepalénsis* resembles *A. Eupatórium*. The potentillas are thirty-one in number: of these, twenty-one are in Dr. Wallich's, and twenty-three in the author's collection: of the latter, six are new, and three are Siberian species. Many are highly ornamental, as may be seen by those already introduced, as well as by those figured in the present work, which would succeed equally well in England. *P. cathaclines*, *multífida*, and *bifúrea* are the three Siberian species found in Kunawur. *Sibbáldia procumbens* is common to Europe, Siberia, America, and the Himalayas.

Nothing can be more ornamental than the double white rose of Northern India and the Deyra Doon, *R. Lyéllii*, *kooza* of the natives; nor than *R. Brandónis*, allied to *R. moschàta* Linn., common in the valleys, or the banks of streams within the mountains, ascending to the tops of lofty trees, especially alders, and hanging down in elegant racemes. On more lofty and drier situations, as the passes of Kunawur, *R. Webbiana*, allied to the Scotch rose, is common. *R. macrophylla* is the most common species on the southern face of the mountains; but on Choor, Urrukta, and such situations, *R. serricea* Lindl. is remarkable in always having four (as *P. Tormentilla* among the potentillas) instead of five, the usual number of petals. In the plains, though so extensively cultivated, no species of rose appears to be indigenous. *R. damascèna*, (*goolab* and *sud-burg* of the natives, *ward* of the Arabs) is that most highly esteemed, and cultivated in Northern India for making rose-

water and the *atter* of roses. The latter is, however, only extensively distilled at Ghazipore, probably from this species, as it is in Persia; though it is difficult to ascertain whether the same species be cultivated for these purposes in Cashmere. Some of the species of *Rûbus*, as in Europe, ripen their fruit early in the season, and others towards autumn. *R. fruticosus* is found in Cashmere. *R. rotundifolius* (*zurd-anchoo* of the Hill people) affords a grateful fruit in April and May; but *R. lasiocarpus* (*kul-anchoo*) not until the rains. *R. cóncolor* comes the nearest to the raspberry, and is not found except on lofty mountains, as Dhumoultee, Choor, and Kedarkanta. In addition to these, a species of strawberry, *Fragaria nubicola*, *Wall.*, very closely allied to *F. collina*, affords a grateful fruit in May, on such places as Phagoo, Mhasoo, Bhoke, &c.

With exception of the *Amygdalæ*, which secrete hydrocyanic acid, none of the *Rosacæ* are possessed of deleterious properties; but many are remarkable for producing the most delicious fruits, both in Europe and Asia. Of most of these, the native country is not well ascertained; but in Europe we point to the s. e., and in India to the n. w., as their native country. Thus, in India, Caubul and Cashmere; and in Europe, Pontus and Armenia, are considered as the native countries of the same fruits, which the ancients generally named from the places whence they were procured. Thus we have *Cérusus* and *Pérsica*, *Armeniaca*, and *Cydônia mûla*. In India, however, the languages being more analogous, they adopt the names of the countries more to the northward. But, as none of these fruits have been found wild in the plains of these Asiatic countries, we must look to the mountains which run along their whole extent, as their probable native sites, especially as we shall there find most of the fruits alluded to, if not wild, yet in a high state of perfection, with new species of the genera to which they belong.

Thus the almond, peach, nectarine, apricot, plum and cherry, with the apple, pear and quince, are all found, either in a wild or cultivated state, on the ramifications of Taurus and Caucasus, Hindookhoosh and the Himalayas, or on the valleys included within them. Most of them are enumerated by Forster and Moorcroft, as being abundant in Cashmere, whence I introduced them into the Mussooree Nursery. Mr. Elphinstone and Lieut. Burnes inform us they abound in Peshawur and Caubul; and by the latter, the peach, apricot, cherry, plum, pear, apple and quince are represented as abundant at Bokhara, and other places on the north of the Hindookhoosh. In Kunawur, on the north of the Himalaya, we have the apricot, peach, plum and apple.

The almond, which, though flowering, does not ripen its fruit in N. India, and of which both the sweet and bitter kinds are known and imported into the northern parts from Ghoorbund, and into the southern parts of India by the Persian Gulf, is so extensively cultivated in the south of Europe, in Syria, and Barbary, that it is probable its native country may be further north than others of the tribe, and therefore the north of Africa, as generally supposed; though it may also be found in the mountains of Asia.

The peach, introduced into Europe from Persia, a country in which the fruit is very fine, and where both the free and clingstone varieties are known, and called *kulloo* and *kardee*; the general name for peach being, Persian, *aroo*, and Arabic, *khookh*. They ripen well, and are of a fine flavor in Peshawur; also, in the north of India, with the well flavored flat peach from China. With care it succeeds also in the elevated land of Mysore; it is found wild in different parts of the Himalayas; as about Mussooree, at elevations of five thousand feet and six thousand feet. In the district of Bissehur there is a distinct kind, called *bhemee* by the natives (*Pérsica saligna nob.*), which, though small, is juicy and

very sweet. The nectarine is found in gardens in Northern India, where it is called *shuffl-aloo*, and *moondla* (smooth) *aroo*, though it does not perfectly ripen its fruit, nor is it known from whence it was introduced, though probably from Caubul.

The apricot is very abundant round almost every village in the Himalayas, rendering it difficult to ascertain whether it be ever found wild, as the trees remain the only vestiges of deserted villages. It has been supposed to be a native of the Oases of Egypt, in consequence of its name (*burkook*) being probably the original of the old term apricoke and Pracœcia; but as that is its name in the Arabic language, which prevails, like the apricot, over a great extent of the Oriental region, the same name is likely to be every where applied to it. At Caubul it is said to be preserved in fourteen different ways, with and without the stones, or the kernel left, or an almond substituted. (*Burnes*.) It is generally brought in this state into Northern India, under the name *khoobanee*; the Arabic name is *mishmish*: in Bokhara, where they are particularly fine, they are called *bakur-khanee*. In the Himalayas, the fruit is called *zurd-aloo*, *chooloo*, and *chinaroo*. In Kunawur, the fruit is dried on the tops of their houses, and, when pounded, mixed with their meal. It is chiefly cultivated on account of the beautiful oil which is expressed from the kernels. These may also be found in the bazaars, under the name of *badamkohee*, or hill almonds. The oil has a slight smell of hydrocyanic acid, and must resemble that from almonds, especially the bitter kind, or that obtained from *Prunus brigantia*ca.

Specimens of the cherry, or *aloo-baloo*, which I obtained from Cashmere, appear to Dr. Lindley not to differ from the common species, which therefore is probably that met with at Caubul, perhaps also at Bokhara. The fruit of *Cerasus Puddum*, common in the Himalayas, is not edible, but is employed for making a well-flavored cherry brandy, though not distilled like the *kirschenwasser*; the bark (*puDMAK*) is used in medicine, as is that of species of cherry in the United States and Mexico. *Cerasus undulata* and *capricida* (the last so called from the leaves being poisonous to goats), and *C. cornuta*, remarkable for its pod-like monstrosity, are handsome and showy trees, growing on lofty mountains, and worthy of introduction into England.

The plum is known in India in a dried state, under the name of *aloo-bokhara*, though chiefly cultivated about Ghuzni. It was seen by Lieut. Burnes, both at Koondooz and Bokhara, whence it may originally have been introduced into the kingdom of Caubul. Specimens of the plants from Cashmere appear to Dr. Lindley to be a new species, *Prunus bokhariensis nob.* To this kind, *kokamalis* is applied as the Greek name, in Persian works on *Materia Medica*. From Irki, near Sabathoo, a small yellow thin-skinned and very juicy sweet plum was introduced into the Saharunpore Garden, and which, though I considered it to be a new species (*P. Alocha*), is very like a variety of the common plum. It is this, probably, which is called *green gage* by travellers. Mr. Moorcroft also mentions a plum in Ludak, *Cerasus tomentosa Wall Cat. N.*, 715. *Prunus triflora Roxb.* is a plum now common in gardens in India, which Dr. Roxburgh states was originally introduced from China. The peach, apricot, cherry and plum all exude gum in Northern India.

Of the Pomacœ, the quince plants, introduced from Cashmere, do not differ from those already in India, *Cydônia vulgaris Pers.* The seeds (*bihee dana*) being mucilaginous, and used in medicine, are imported from Caubul and Cashmere into Northern, and by the Persian Gulf into Southern, India.

Of pears, that of Samurcund is most noted: they are plentiful at Caubul, and excellent at Peshawur; and are brought into India by the northern merchants from Cashmere and Boodurwar. In the gardens

of India, the only kind known is one introduced from China, *Pyrus sinica*, or sand-pear, which more nearly resembles the baking pear than any other I know. *P. Pashia* Ham., *P. variolosa* Wall., or wild pear tree of the hills, attains a great size; but the fruit is not edible until it becomes somewhat decayed. *P. lanata* and *crenata* are other species of this genus, which are found at higher elevations. The first affords an edible fruit called *paltoo*.

Apples alone of the tribe succeed well in the southern parts of India, as they are stated to be excellent at Bangalore and in Tirthoot; and, though small, of a good quality in most parts of Northern India. As an instance of the difficulty attendant on the introduction of European plants into Northern India, it may be mentioned that an apple tree from Liverpool, in consequence of being the only one which survived, cost upwards of 70*l.* before it was planted in the nursery at Mussooree, where, however, it was thriving along with the fruit trees introduced from Cashmere. The apple is grown in some of the villages of the Himalaya, as well as in Kunawur. They are remarkably fine at Peshawar and Caubul, and are brought down to India from Boodurwar and Cashmere. On the northern face of the mountains they are grown both at Balkh and Bokhara, and are remarkably fine at the former.—(*Royle's Illustrations of the Himalaya Mountains—Gard. Mag.*)

ART. II. Foreign Notices.

London Horticultural Society's Show, May 14th, 1836.—On Saturday the 14th, the Horticultural Society of London had its first exhibition of flowers and fruit for this year. The day was deliciously fine; and, although vegetation is somewhat backward, the gardens looked as fresh and gay as possible in their young verdure. The company was quite crowded, as might naturally be expected, by those wishing a little fresh air. There were three bands in attendance on this occasion. The display of flowers was one of the least attractive that we have seen here—a circumstance owing, no doubt, to the protracted severities of the season, which repressed vegetation in the open air, and in hot-houses compelled the use of higher artificial temperature than is congenial to vegetable life. The whole delicate class of Cacti and Azaleas seemed particularly to have suffered from these unkindly influences; the *pelargonium* tribe bore less appearance of unhealthiness; the fruits looked, comparatively, in better condition; the specimens of Hamburgh grape were very luxuriant; some oranges were amongst the finest we have known of this country's growth; and the display of cucumbers was also good. While we have to remark that the flowers were less luxuriant in appearance, and more scanty in point of number, than we have before seen here; we need scarcely add, at the same time, that they formed a delightful exhibition. Amongst the visitors to the gardens we noticed the ambassador from Oude, who seemed much interested in a display of our northern rivalry with the brightest floral ornaments of his native land. The following is a list of prizes adjudged on the occasion:—

Gold Knightian Medal, to Messrs. Rollison, for the best stove Orchidææ; Mr. Green, gardener to Lady Antrobus, for stove or green-house plants, in collections of ten varieties.

Large Silver Medal, to Mr. W. Smith, for green-house azaleas; Mr. Green, for Cacti in flower; R. Gibson, Esq., for melon Cacti; J. Allcard, Esq., for ferns; Mr. Davis, gardener to Lady Clarke, for grapes;

Messrs. Luscombe and Pine, for heaths; Messrs. Rollison, for Asiatic Orchidaceæ; ditto, for American ditto; ditto, for a collection of stove and green-house plants; Mr. Lane, gardener to J. H. Farmer, Esq., for a collection of stove and green-house plants; Mr. J. Young, of Epsom, for a New Zealand plant; Mr. Green, for a Chinese plant.

Silver Knightian Medal, to Messrs. Wather, for hardy azaleas; Mr. W. Smith, for green-house azaleas; Mr. James Young, for ditto; Mr. Salter, for Amaryllaceæ; Mr. Fuller, for ditto; Mr. Green, for calcæolarias; Mr. Glenny, for ditto; Mr. J. Wilmot, for cucumbers; Mr. Lane, for ditto; Mr. Falconer, gardener to A. Palmer, Esq., for Cacti in flower; Mr. Rollison, for melon Cacti; Mr. Redding, gardener to Mrs. Marryatt, for ferns; Mr. Wilmott, of Isleworth, for grapes; Mr. Mountjoy, of Ealing, for heart's-ease; and Mr. Glenny, for ditto.—(*Paxton's Hort. Reg.*)

ART. III. Domestic Notices.

Juniperus virginiana.—Two splendid and ancient trees of this durable timber, may be seen growing each on the summit of a small diluvial hill near my present residence. Their unique and peculiar beauty, and singular similarity in size and form had long attracted my attention. In nearly a century they have been observed as comparatively of the same magnitude as now. I should think they might be as old or older than the settlement of the country. They are twin trees on twin hills. The circumference of the one is five feet and seven inches, and that of the other six feet. The length of trunk, exclusive of the base of the branches and crown of roots, answers in each to the circumference. Both are risen and decayed at the heart. The tops are nearly flat, and the annual increase of the branches very small. They are splendid specimens of the species. From their great size and elevated situation, they are conspicuous objects in the scenery, and would do honor to any park or lawn, as noble representatives of an American forest tree.—*Yours, An Observer of Trees, South Hingham, Aug. 8.*

Quere.—Have any attempts been made, this season, to cultivate the far-famed "Oxalis crenata," the supposed rival of the *unrivalled* potato, and what the success?

Quere.—Is "*Morus multicaulis*" a species, or a variety?

Zephyranthes rosea.—We recommend to the lovers of delicately beautiful plants, that interesting and pretty individual of the Amaryllaceæ, "*Zephyranthes rosea*." We saw a bed of this species, a few days ago, which promised great beauty. It is tender, but needs only the same care as the splendid *Tigridia*, near which it might be grown with great effect. Plant out the offsets in the spring, and on the decay of the foliage remove them to a dry and warm situation for the winter. The bulbs are procured at any good collection of exotic plants.—*R.*

Microscopic beauty of the fruit of Aspidium marginale.—Having occasion to examine, with a magnifying glass of considerable power, the indusium of the fruit on *Aspidium marginale*, I was delighted to observe the rapid dehiscence of its beautiful conceptacles and evolution of its minute spores. The indusium of this fern is furnished with a lateral sinus, very distinct under a common pocket lens, which serves as an excellent character. Beneath it are the pedicellated conceptacles, which are sometimes thrown off from the common axis of the fruit, exhibiting their ring and entire figure. These elastically unroll themselves, and numerous minute bodies (which to the naked eye are but impalpable powder or dust), are scattered, leaving the ring entirely empty.

The process is so singular and beautiful, that its observation may be recommended to those who are fond of examining the wonders of the vegetable economy by the aid of the microscope.—(*Ib.*)

ART. IV. Massachusetts Horticultural Society.

Saturday, July 30th., 1836.—Exhibited. From T. Lee, Esq., *Asclepias tuberosa*, *Hibiscus vescarius*, *Málva moschàta*, *Gèum coccineum*, *Lysimàchia quadrifòlia*, *Ròsa rubifòlia* (?), &c. From M. P. Wilder, dahlias, viz:—Countess of Liverpool, British Queen, Brown's Ophelia, Dennissi coccinea, Widnall's Jason and Erecta. From S. Walker, *Lysimàchia vulgàris*, *Lythrum verticillàtum*, *Mouàrda didyma*, *Campànula persicafòlia*, plèno álbo, *Clématis alpina*, the dwarf-flowering horse-chestnut, dahlias, pinks, double scarlet lychuis, sweet scabiouses, &c. From the Messrs. Winship, *Lilium càndidum*, *Zephyranthes ròsea*, *Nèrium spléndens*, *Hòya carnòsa*, *Gloxinia maculàta*, *Rudbeckia fasciniàta*, *Láthyrus grandiflorus*, *Gladiolus nataléisis*, *Hemero-cállis cærúlea*, phloxes, pinks, heliotropiums, &c.; also, presented by Messrs. Winship, from the garden of the lady of Major Burt, of Worcester, three dahlia flowers, springing from one main stem. From Hovey & Co., *Phlox pyramidàlis penduliflòra*, and p. álba fimbriàta, *Wheeleriàna*, and ròsea, *Dracocéphalum altaieñse* and rèpens, *Coreópsis lanceolàta*, tripteris, and *Atkinsoniàna*, *Státice Gmelina*, *Delphínium máximum* plèno, *Campànula álbo* plèno, yellow sweet sultans, new scarlet Zinnia, &c.; also, the following kinds of dahlias:—Springfield Rival, Countess of Liverpool, álba fimbriàta, Dennissi, and Widnall's Enchanter.

Fruits:—Gooseberries of several kinds, from S. Walker, viz:—Roaring Lion, Hopley's Globe, Crown Bob, Yellow Viper, Lancaster Lad, Golden Lion, Whitesmith, Bank of England, and a seedling green gooseberry; seedling currants, very fine and large. From John Hovey, gooseberries of the following kinds: Whitesmith, Princess Royal, Hopley's Globe, and Red Lion. From S. Downer, petit Muscat pears. From J. L. L. F. Warren, Roaring Lion gooseberries; also, two fine muskmelons, and a squash.

Read. A paper by M. Emilien de Wael, of Antwerp, on the cultivation and acclimization of the *Morus multicaúlis*.

August 6th.—Exhibited. From S. Sweetser, dahlias, viz:—Duchess of Bedford, Beauty of Salem, Belladonna, Cockade Yellow, King of the Yellows, Emperor of the Yellows, Marchioness of Lothian, King of the Whites, Widnall's Enchanter, Widnall's Othello, Negro Boy, Barrett's Susanna, and crimson globe; Noisette Lamarque and Duc de Broglie roses; *Gladiolus blándus*, *Coreópsis Atkinsoniàna*, poppies, &c. From R. T. Paine, *Gladiolus blándus*, hirsútus, and tiger flowers. From Messrs. Winship, *Enothèra glàuca*, *Clématis flámula*, *Lythrum salicària* (?), *Campànula azùrea*, *Láthyrus tuberosus* (?), *Verónica incarnàta* (?), *Eryngium plànum*, *Hypéricum monógynum*, *Gloxinia speciòsa*, *Melaleuca hypericifòlia*, *Anthemis nobilis* plèno, *Achille'a phœnícea* plèno, pinks, &c. From Wm. McCulloch, *Verbena venòsa* and seedling calceolarias. From M. P. Wilder, dahlias, viz:—Countess of Liverpool, Queen of the Dahlias, Queen of the Whites, Lady Fordwich, Queen of the Yellows, and Douglas's Augusta.

From Hovey & Co., dahlias of the following varieties:—Emperor of the Yellows, Douglas's Criterion, Beauty of Salem, Julia, Widnall's

Pactolus, Widnall's Othello, Widnall's Enchanter, Widnall's Phyllis, Well's Marpesa, Sulphurea exelsa, Sulphurea perfecta, and a new seedling; also, *Dianthus superbus*, *Phlox americana*, Shepérdi, *Wheeleriàna*, *roscum* and *pyramidalis penduliflora*, *Státice Gmelina*, *Coreópsis lanceolata* and *tripteris*, and fine double dwarf larkspurs. From S. Walker, *Valeriàna rubra*, *Lythrum verticillatum*, *Lysimàchia vulgaris*, *Monàrda purpurea*, *Cássia marylandica*, *Euothea Frazéri*, phloxes, pinks, carnations, picotees, larkspurs, marygolds, &c.

Fruits:—From E. Vose, fine currants. From Joshua Gardener, Dorchester, white Juneating apples. From M. P. Wilder, Madeleine pears. From E. Breed, Charlestown, forced peaches. From John Heard, Esq., Madeleine pears. Gooseberries of several varieties were shown by Messrs. S. R. Johnson, William Kenrick and E. Breed.

August 13th.—Exhibited. From M. P. Wilder, dahlias of several varieties, viz:—Metropolitan Calypso, Levick's Shannon, Douglas's Augusta, Cedo Nulli, Queen of Whites, Well's Paragon, Belladonna, British Queen, Erecta, Dutchess of Bedford, Inwood's Iriel, and *Dennissi coccinea*. From S. Sweetser, dahlias:—King of Yellows, Laura, Lady Sefton, Lady Campbell, Granta, Widnall's Othello, Widnall's Chancellor, King of the Whites, Dutchess of Bedford, Cassina, Queen of Dahlias, Belladonna, Purple Globe, Crimson Globe, Yellow Turban and Lass of Richmond Hill. From S. Walker, several dahlias:—Queen of Belgium, Fanny Kemble, Groombridge's Matchless, atropurpurea and crimson globe; also, several bouquets of flowers.

From Hovey & Co., the following kinds of dahlias:—Amanda, Agrippina, Andromeda, Rubicunda formosa, Dutchess of Bedford, Sulphurea perfecta, Insurmountable, Springfield Rival, Barratt's Susanna, Lord Liverpool, Widnall's Perfection, Widnall's Rising Sun, Widnall's Enchanter, Brewer's Rival King, Paragon of Perfection, and a fine seedling. From Jos. Breck, several kinds of dahlias, and a new seedling. From Messrs. Winship, a collection of various plants. From T. Mason, a bouquet of flowers.

Fruits:—From J. Warren, Newton, seedling plums; an oblong purple fruit, of medium size, and valuable for its early maturity. From Thomas Mason, raspberries. From R. Manning, Beauty of Summer (Cox) and Madeleine (*Pom. Mag.*) pears.

August 20th.—Exhibited. From the Botanic garden, by Wm. Carter, dahlias, viz:—Teucer, Douglas's Augusta, Miss Pelham, Daphne, Amanda, Le Brilliant, Queen of the Dahlias, William IV., Queen of Wirtemberg, and a seedling of the latter; also, *Hedychium Gardnerianum*, *Magnolia* sp., three fine seedling phloxes, and a white seedling variety of the *Lobelia cardinalis*. From O. Everett, jr., Boston, dahlias, viz:—Rose d'Amour, Daniel O'Connell, Levick's Commander-in-Chief, Agrippina and Shannon. From T. Mason, tea roses, anemones, pansies, statices, *Gladiolus blándus*, and several kinds of dahlias, viz:—Transcendant, King of Yellows, Countess of Liverpool, &c. From S. R. Johnson, dahlias, viz:—Harris's Fulminans, Widnall's Granta and Angelina. From S. Walker, *Valeriàna rubra*, *Zinnia elegans*, var. *coccinea*, *Verbena chamædrifolia*, *Dracocéphalum virginianum*, *Veronica virginicum*, seedling delphinium, pansies, pinks, phloxes, &c., and several dahlias, viz:—Lord Liverpool, Agrippina, Brown's Ophelia, Le Brilliant, &c. From S. Sweetser, the following dahlias:—King of the Yellows, King of the Whites, *Dennissi*, Negro Boy, Emperor of the Yellows, Lady Grey, Lady Sefton, Transcendant, Paragon of Perfection, Foster's Premier, Countess of Liverpool, Springfield Rival, and Queen of Dahlias; also, a fine specimen of *Cobæa scandens*. From Hovey & Co., several dahlias, viz:—Hermione, Jupiter, Coronet, Widnall's Clio, Widnall's Rising Sun, Cedo Nulli, Lord Liverpool, Rose

d'Amour, Belladonna, Lady Sefton, Amanda, Agrippina, Queen of Dahlias, Queen Bess, Negro Boy, Countess of Liverpool, Denmissi, Rôsea álba, L'Inapproachable, Widnall's Virginia, Widnall's Queen of Roses, Widnall's Enchanter, Paragon of Perfection and Springfield Rival.

ART. V. Exhibitions of Horticultural and Floricultural Societies.

Horticultural Society of Charleston, S. C.—This society celebrated their anniversary in Charleston, at Seyles' Hall, on Wednesday the 13th of July last. There was a splendid exhibition of flowers and ornamental plants, natives and exotics, together with such fruits and vegetables as the season afforded. Making all allowances for the destructive effects of the last winter, the protracted spring and excessive rains, yet the exhibition was highly creditable to the Society, to the ladies and gentlemen who were contributors, and to the committee of arrangements who conducted the proceedings.

Among the articles exhibited we find noted *Cinnamòmum Cámphora*, *Hibiscus Rôsa sinénsis*, *Piménta vulgáris*, *Arum discolor*, *Ficus elástica*, *Bignônia grandiflora*, *Xylophylla angustifolia*, and the coffee tree in fruit.

The following premiums were awarded. *Vegetables*:—To Mr. Tobin, for the best cauliflower, a silver medal; to the same for the best brocoli, a silver medal; to Mr. D. C. Webb, for the best leeks, a silver medal; to Mr. James Legare, for the best parsnips, a silver medal; to Mr. E. W. Bounetheau, for the best silver onions, a silver medal; to the same, for the best Madeira onions, a silver medal; to the same, for the best salsify, a silver medal; to Mr. Joseph O'Hear, for the best early potatoes, a silver medal; to Mr. John Michel, for the best artichokes, a silver medal; to Mr. Justus Hartman, for the greatest variety of fine vegetables produced on any one farm or garden, a silver medal; to Mr. Joseph A. Winthrop, for introducing the cultivation of two fine varieties of squashes—the California and cocoanut squashes, a silver medal.

Fruits:—To Mrs. William Clarkson, for the finest grapes, a silver medal; to Mr. F. Petit, for the finest native cultivated grapes, a silver medal; to Dr. Henry Boylston, for the finest plums, a silver medal; to Mr. Jonathan Lucas, for the finest strawberries, a silver medal; to Mr. John Michel, for the largest quantity of fine strawberries, a silver medal; to the proprietors of Woodstock, for the largest piece of ground, well cultivated in strawberries, a silver medal; to Col. Simon Magwood, for the greatest variety of fine pears, a silver medal; to L. H. Kennedy, for the greatest quantity of fine Antwerp raspberries, a silver medal.

We are happy to learn that attention is paid to the cultivation of heaths and camellias. By the report of the standing committee of the Society, it is believed that heaths will flourish well in the open air in the vicinity of Charleston. Camellias the two last winters have suffered severely, and the prospects of their successful cultivation in the open air are mostly given up. The early season at which they bloom subjects the buds to hard frosts. Roses are grown to a great extent, and several fine collections exist in the vicinity. Ranunculuses are also cultivated in great variety, and flourish extremely well. Remarkably fine flowers were produced from several gardens. Dahlias have not yet become so commonly grown as they are with us. A plant of *Metrosidëros* stood out the last winter, and flowered in the spring. Premiums were awarded for camellias, carnations, &c. (*Southern Agriculturist*.)

ART. VI. Quincy Market.

		From	To			From	To
<i>Roots, Tubers, &c.</i>		\$ cts.	\$ cts.	<i>Pot and Sweet Herbs.</i>		\$ cts.	\$ cts.
Potatoes :				Marjoram, per bunch,		6	12
Common, { per barrel,	1	50		Savory, per bunch,		6	12
		50	75	Spearminat, per bunch,		6	
Chenangoes, { per barrel,	1	50		<i>Fruits.</i>			
		50	75	Apples, dessert :			
Turnips :				New { per bushel,	1	50	
New, per bunch,		8				50	
Onions :				Shropshirevine, per bushel,	2	00	
red, per bushel,	2	00		“ per peck,	50		62½
red, { per bunch,		4	6	Pears :			
white, { per bunch,		4	6	Jargonelles, { pr. bus.	2	00	2 50
Beets, per bunch,		6		English Catherine, { pr. bus.	6	00	8 00
Carrots, per bunch,		6		Peaches, per bushel,	1	50	2 00
Salsify, per bunch,	12	½		“ per half peck,	25		50
Horseradish, per pound,	8		12½	Apricots, per dozen,	50		75
Radishes, per bunch,	4		6	Plums, per quart :			
Shallots, per pound,	20			Green Gages,	75		
Garlic, per pound,	14			Italian Damask,	75		
<i>Cabbages, Salads, &c.</i>				Early Black,	25		
Cabbages : per dozen,				Gooseberries, per quart,	17		25
Early York,	50		75	Currants, per quart,			
“ Sugar-loaf,	50		75	White,	10		
Savoy, each,	6		8	Red,	10		
Cauliflowers, each,	12½		25	Black,	10		
Lettuce, per head,	6		10	Watermelons, each,	25		50
Celery, per root,	12½		25	Pine Apples, each,	25		37½
Tomatoes, per dozen,	25		50	Grapes: (hot-house,) pr pound,			
Sweet corn, per dozen ears,	20		25	Black Hamburg,	1	00	
Peas : { per bushel,	1	50	2 00	White Sweet-water,	75		
		37	50	Blueberries, per quart,	10		12½
Beans :				Blackberries, per quart,	17		
String, { per bushel,	50		75	Cucumbers, per dozen,	12½		17
		20	25	“ for pickling, pr. hund.	37½		50
Shelled, per quart,	17		20	Oranges, { per box,	3	00	3 50
<i>Squashes and Pumpkins.</i>						25	50
Summer, crookneck, per doz.	12½		17	Lemons, { per dozen,	5	00	6 00
Summer Bush, per dozen,	12½		17			37½	
<i>Pot and Sweet Herbs.</i>				Shaddocks, each,	25		
Parsley, per half peck,	25			Almonds, (sweet) per pound,	12		14
Sage, per pound,	17		20	Filberts, per pound,	4		6
				Castana,	3		6

REMARKS. Although the month of July bade us anticipate a favorable harvest, we fear that our expectations were formed but to be disappointed. This month up to this date has been uncommonly cool, and in various sections of the country, to the north, we hear of the destruction of tender vegetables by the frosts. Vegetables of all kinds are more scarce than in seasons in general, and some kinds we fear will not arrive at sufficient maturity to admit of any profit to the farmer. Vegetables planted for seed look despairingly, and the quantity saved will be very small; of cucumbers there will be scarcely any. Fruits are also very backward.

Potatoes now come in tolerably plenty; as the past season has been favorable for their growth. Unlike other vegetables which are cultivated in our vicinity for the market, they like a cooler climate and a stiffer

soil : old ones are all gone. Turnips are plenty. Onions are tolerably plenty, and the past week several bushels have come to hand—early in comparison with other articles. We are glad to state that the demand for salsify, or perhaps, as it is better known, the vegetable oyster, has much increased the present season ; we are certain that when it has been fully tried, and cooked in a proper manner, that it will be eagerly sought after—like the tomato, which at first was eaten with great prejudice, it will become as generally liked. Radishes are not so plentiful.

Of cabbages, the stock the coming winter will not be very large, unless the ensuing month is warmer than we now anticipate. Early sorts come in slowly ; savoys have just made their appearance. Cauliflowers are not yet brought in abundantly. Lettuce is now quite scarce, especially that of good quality. Tomatoes are so highly esteemed, that they command the present season as high a price as the finest fruits : very few have been raised in this vicinity, and the market is supplied almost wholly from New York. Sweet corn for boiling is extremely scarce. Peas are less plentiful than at the time of our last report. String beans are very abundant ; indeed the prospect is now of but few others ; no sievas, which usually are plenty at this time of the year, are to be had, and the first shelled beans of any kind came to hand the last week ; Limas will not probably ripen at all. Squashes are sufficiently plenty to supply the demand, and prices moderate. West Indias are all gone.

Fruit raised in this neighborhood, with the exception of pears, is not plentiful. But the facilities which are afforded by the rail-road for transporting merchandise are taken advantage of by marketers, and large quantities of very excellent quality are brought from New York. Apples will be plenty ; fine early harvests and Shropshire vines may be now had. Of pears, there is a much greater variety than was to be found in the market a few years since ; jargonelles and English Catharines are kinds much called for. Peaches raised in this vicinity in green-houses or graperies, command a good price, more, we believe, for their beauty than their flavor, as few that we have seen possess much of the latter quality ; cultivators are too eager to send their fruit to market, and gather it before it arrives at maturity ; the supply is from New York. The supply of plums is from the same source as that of peaches ; a rather new sort, this year, is the Italian damask, which is a very good plum. Currants are tolerably plenty. Berries of all sorts are scarce, and prices uncommonly high. Few watermelons have yet come to hand. Cucumbers come to hand very slowly ; the quantity for pickling will be very small this year. *Yours, M. T., August 22, 1836.*

ART. VII. *Meteorological Notice.*

FOR JULY.

THE month of July, though not near so warm as seasons in general, was quite pleasant. The prevailing winds were from S. to E. The highest range of the thermometer, as will be seen below, was only 88°, and this only one day. There were several fine showers, but the month was not warm enough for vegetation to progress rapidly.

THERMOMETER.—Mean temperature, 66° 13'—highest, 88° ; lowest, 50° above zero.

WINDS.—N., three days—N. E., two—E., seven—S. E., three—S., eight—S. W., two—W., four—N. W., two days.

Force of the Wind.—Brisk, fifteen days—light, sixteen days.

Character of the Weather.—FINE, ten days—FAIR, ten days—CLOUDY, eleven days.

Rainy, six days—Misty, two days.

MONTHLY CALENDAR
OF
HORTICULTURE AND FLORICULTURE,
FOR SEPTEMBER.

FRUIT DEPARTMENT.

Grape Vines, in the green-house or grapery, will now have ripened their fruit, and will be maturing their wood. Trim off the laterals, and pick off all decayed leaves. Give a plenty of air, so that the wood will get well ripened.

Strawberry beds may yet be made; for directions, see Vol. I, p. 299, and the current volume.

Grape Vines in the open air. These will now be coloring their fruit. Trim away the lateral branches, and keep the vines thin of wood.

FLOWER DEPARTMENT.

Mignonnette seeds should now be sown for a spring crop.

Gilia tricolor: seeds of this beautiful plant should be sown, if wanted in pots.

Schizanthuses: sow the seeds this month, and the plants will bloom freely in the spring.

Chrysanthemums must be kept well watered, occasionally using liquid manure.

Roses may still be budded.

Green-house plants: these should now be potted so that they may get established in the pots before they are taken in.

Dahlias should be kept well fastened up to the stakes, as the winds, which are generally prevalent this month, are apt to break them down. Trim away all superfluous wood, and when the buds are very numerous, thin them out; good specimens of flowers may be procured in this way.

Pæony roots should be separated and set out this month.

Herbaceous plants of all sorts may be safely removed this month.

Pink Pipings may be put in with success this month; make new beds, and set out those put in in July.

Annual flower seeds, of several sorts, should be sown this month; such as larkspurs, clarkias, &c.

Cyclamen roots: these should now be taken out of the border and potted.

White lilacs may be set out this month.

VEGETABLE DEPARTMENT.

Earth up celery plants this month.

Lettuces: sow these for a winter crop.

Spinach: sow this now for a spring crop.

THE
AMERICAN
GARDENER'S MAGAZINE.

OCTOBER, 1836.

ORIGINAL COMMUNICATIONS.

ART. I. *Some Remarks on the Genus Phlox.* By JOHN LEWIS RUSSELL, A. M., Prof. Bot. and Veg. Phys. to the Mass. Hort. Soc.

THE almost exclusive American genus of *Phlóx*, from its varied and exceeding beauty, claims a much higher regard of the favorable notice of the floriculturist than the present taste seems to evince. Who is not struck with the appearance of some snug and favorite garden site, where, from its confined limits, a few only of the most ornamental plants can be introduced, when he sees a good and select collection of phloxes occupying the well arranged borders? I have often thought than an entire collection of the numerous species and varieties of this single plant, grown in a manner best suited to their different habits, would make a rare, unique, and altogether unrivalled appearance, and recommend itself, at least to some tastes, for its *novelty*.

I suspect that the comparatively low estimation in which the phloxes are held in this country is mainly owing to the improper management of their cultivation. Thus it is an uncommon sight to see a well grown phlox. I know not how, and with what success, they cultivate the plant in England, where the humid nature of the climate would no doubt materially assist in producing, if not fine flowers, at least a considerable duration of them. It is however certain that the plant is there considered worthy of much attention, from the fact that new and *sometimes* fine varieties are produced by the ingenuity and patience of florists.

From the neglect to the wants of the several species, as observable in the gardens of this vicinity, one is not much tempted

to give even a passing notice to the huge mis-shapen clumps and patches which disfigure our borders. Instead of a few strong, straight, well clothed stems, with rich panicles or pyramids of purple or white corols, we see fifty or more weak, bare, yellow, desiccated stems and heads, fading under the powerful influence of the sun, or covered with the insidious mildew, so as to forbid a near approach. By a rarer luck, and owing to the moisture of the season, the earlier kinds escape this fate, and are therefore more universally admired and cultivated. But though superb patches of *P. subulata*, *setacea* and *nivalis* may dazzle or delight the eye for a few weeks in early spring by their vivid or *snowy* flowers, yet no sooner have their floral gems withdrawn themselves from our notice, than neglect causes the plants to assume a sickly and faded appearance, instead of the deep vivid green which they should possess. It is my own opinion, judging from the native habitat of *P. setacea*, on rocky and precipitous hills, and in a rich, strong, loamy soil, that the *rock work* would afford the best artificial mode of growing them to perfection. The moisture which the covered and buried stones would naturally give to the very small and fibrous roots, would produce a strong, vigorous and constant growth to the plant.

Another great attraction which these species possess is their habit of *autumnal* flowering; and if advantage was taken of this disposition, by supplying them with the requisite means, their estimation would be greatly enhanced.

In like manner that lovely vernal species, *P. stolonifera*, might be made more conspicuous and manageable by its introduction on the rock work, where its *stolones* would have ample room to extend without interfering with more delicate plants, as they are certainly wont to do in the border.

The finest plants of the delicate blue *P. divaricata* I had the pleasure of seeing in the spring of 1835, on the deep rich meadows through which the slow and quiet Monongahela flows; and any one who has ever noticed any species of this superb genus in the perfection of nature, is inclined to feel a sincere pity for its miserable fate when under the misnomered *fostering* care of the common cultivator.

P. pilosa naturally thrives in rather wet meadows, and so different is its appearance, from the specimens we see in gardens, as to be hardly recognized as the same and identical plant.

Perhaps it may not be *generally* known that all the early flowering tall species may be made to send out a new and successive display of flowers, by removing the tops just after flowering. From the axils of the vigorous leaves, and oftentimes from the roots, new and strong flower branches issue. By this simple management the general unsightly appearance of the withering plant is avoided, and a fine late succession of good flowers in-

sured. This is particularly the case with *P. maculàta*, *suavèolens* and var. *serótina*. A valuable hint may thus be acquired by some young or unexperienced amateur, of considerable advantage to him.

Mr. William Carter, who has the charge of the Botanic Garden in Cambridge, has succeeded in raising two or three very fine varieties of the species *P. pyramidàlis*. One of these he lately pointed out, with very large flowers in a compact head, suggesting a trivial sub-specific—*globòsa*. A very curious foreign variety, with white flowers and variegated foliage, was also quite attractive, from its peculiarity. Mr. C. evinces much zeal and taste in the culture of the phlox, and this garden perhaps possesses as good a collection of the species as any in the United States.

To grow the phlox to perfection, but one rule can be given, true in this as in every other plant,—copy nature. This, we fear, is too much neglected; and the complicated artificial means of horticulture have heretofore reduced to one and the same treatment, species of widely differing habits. In general they all require more moisture and richer soils than are afforded them by the scanty provision which our florists furnish. I have now a single stem of *P. paniculàta*, planted in May last, in a moist, light and rich soil, mostly vegetable mould, and instead of a few depauperated flowers, a splendid panicle of great dimensions and of brilliant color has convinced me of the just and proper mode of its treatment.

ART. II. *On the Repotting and Management of Chinese Roses.*
By J. W. RUSSELL.

As this is the season for repotting Chinese and all tender roses, I herewith send you a few brief remarks on the method of performing this kind of work.

For Chinese and tender roses a quantity of good fresh earth should be procured; preference should be given to that taken from an *upland* pasture field; the sod, with about four or five inches of earth adhering to it, is the very *best* part of the *soil*. If this has been procured three months before wanted for use, and turned over once or twice, breaking the whole and mixing the turf well with the soil, so much the better; however, if

the earth is to be obtained immediately when wanted, take a sharp spade, and pare off about an inch of the green *sward*, and take the under soil to the depth proposed, observing to break it pretty fine with the spade or trowel, but by no means to pass it through a *riddle*, for, by so doing, the most nutritive part of it is thrown away. When this is done, add about one half old *hot-bed* manure, or, if this is not at hand, use any other kind of stable manure that is well decomposed, with a portion of sand, and mix the whole well together; this thoroughly done, the compost is ready for use.

Supposing the plant to be repotted is to be removed into a pot a size or two larger: in order to take the plant out of the pot with the ball entire, turn it *upside down*, and by giving the rim of it two or three gentle taps on the potting bench, the plant, with the ball of earth and roots, will, generally, immediately leave it; then trim off all the dry, matted, and mouldy fibres of the roots, which spread about the side and bottom of the ball, and, with a small sharp-pointed stick, scrape away very carefully a part of the old soil all round; this done, put in a few potsherds at the bottom of the new pot for drainage, and having first put a little of the coarsest of the compost on this, place the plant in, filling up all round the ball to within about half an inch of the top, observing to cover over the surface of the old ball about an inch with the new compost. A thin piece of stick may be used with good effect, to work down the soil at the *sides* of the pot; then, by giving the bottom of the pot two or three thumps on the potting bench, and a gentle watering afterwards, the operation is completely finished.

A similar compost is equally good for geraniums, only making use of half the quantity of manure specified for the roses. The repotting and trimming of the roots, &c. is the same. It is also as good a compost as any that I have ever yet tried for orange and lemon trees.

Yours,

J. W. RUSSELL.

Mount Auburn, Cambridge, Sept. 13, 1856.

ART. III. *Calendar of Plants and Shrubs in bloom from the month of May to October, inclusive.* By the CONDUCTORS.

IN the month of August the flower border is not so prolific of beautiful flowers (excepting the dahlia) as July. And unless

recourse is had to some particular plants, the latter part of the month will pass off, leaving the garden with a rather meagre aspect. For this emergency a judicious gardener will prepare himself in season: in the month of June, ten-week stocks, schizanthuses, &c. will have been sown and transplanted into pots, for the purpose of turning into the border as soon as the tops of the biennial and perennial plants are cut away after they have done blowing; these will flower beautifully until destroyed by frost. All the sorts of lobelias that have been brought forward in pots should be plunged in the border, where they will make a fine display with their brilliant blossoms. By pursuing some such system as this, the garden, in the month of August, where there is a good collection of dahlias, will present a gayer aspect than any other in the year.

On lawns may be placed, this month, pots of dahlias, which will flower profusely if properly treated and watered with liquid manure. Pots of *Agapanthus umbellatus* also have a fine appearance distributed about among the other plants.

In gardens where there is a good stock of the perpetual roses, they will continue to open their beautiful and fragrant blossoms; so popular will this tribe soon become, that no good garden will be without a number of the finest varieties; they certainly have double the claim to our admiration that many of the common sorts have; for they not only display their blossoms in the spring, and continue to do so until frost, but to their beauty add a delicious fragrance.

Dahlias are now the most fashionable flower: the great perfection to which the English florists have carried the production of new varieties certainly excites our wonder and admiration; the splendor of some, and the delicacy of others, of the newest sorts, surpasses any thing that can be imagined, and no garden can be said to be complete, unless a goodly number of the best varieties are cultivated. The dwarf kinds look well planted in the border among the other plants; but the taller and more free growing sorts look much the best grown in plats by themselves. They begin to bloom this month, and continue to flower until frost kills the plants.

August.—There are but few shrubs in bloom this month: some of the handsomest are *Cléthra alnifolia*, *Spiræa tomentosa* and *salicifolia*, and the double and single althæas. The snow-berry is beautiful with its fruit; of twining shrubs, the honeysuckles are in flower, and, towards the latter part of the month, *Bignonia radicans*. Among the biennials and perennials are, *Lobelia cardinalis*, *fulgens*, *speciosa* and *splendens*, *Asclépias tuberosa*, *Gaillardia aristata* and *picta*: *Rudbeckia laciniata* and *purpurea*, the former very showy: *Acónitum Halleri* and *álbi-*

dum, *Eryngium* dichotòmum, *Campánula persicàfòlia* flòre plèno, and flòre plèno álbo, *Vonsoniàna* (?), álba plèno, *alliarifòlia*, *liliflòra*, *carpàtica*, *urticàfòlia*, and *lactiflòra*: *Diánthus supérbus*, (exceedingly fragrant), *Verónica exaltàta*, *virgínicum*, and *sibèrica*, *Verbàscum pyramidàlis* and *phœniceum*, *Ænothèra microcárpa*, *taraxacifòlia* and *missouriénsis*: *Epilóbium angustifòlium* and *spicàtum*, *Antirrhìnum màjus* and its varieties: *Dracocéphalum altaieñse*, and *virginiànum* (both elegant), *Coreópsis tripteris*, *lanceolàta*, and *Atkinsoniàna*: *Clématis flòrida*, and flòre plèno, *Thalictrum alpinum*, *Pentstèmon Richardsòni*, *Digitàlis*, and *speciòsum*, *Digitàlis lùtea*, *Coronilla vimínea*, *Potentilla Russelliàna*, *Mayiàna*, and *nepalénsis*, *Láthyrys grandiflòrus*, *Monárda didýma* and *purpùrea*, *Aster sibèrica* and *Nòvæ A'nglæ*: *Phlòx pyramidàlis rubra*, p. *penduliflòra*, and p. álba, *Americàna*, *acuminàta*, *maculàta*, *tardiflòra*, *corymbòsa*, *cárnea*, *suavèolens*, *cordàta*, *latifòlia*, *fimbriàta*, *Wheeleriàna*, *ròseum* and *decussàta álba*: *Liàtris spicàta*, *Euphòrbia corollàta* and *Cyparissias*, *Resèda odoràta* var. *frutèscent*, *Delphinium sinénsis*, *Kिताibèlia vitifòlia*, *Gilia coronopifòlia* *Státice Gmelìna* and *latifòlia*: *Lychnis grandiflòra*, *Fùnkia subcordàta*, *A'nthemis nóbilis* plèno, *Achillæa phœnicea* plèno; *Valeriàna rubra*, *Cássia marylándica*, *Chelòne glàbra*, *Lysimàchia vulgàris*, dahlias, hollyhocks, salvias, pinks, &c. Of bulbous roots, *Gladiolus natalénis*, *Lílium canadèse* and *tigrinum*, and *Tigrídia pavònia* and *conchiflòra* are now in full bloom.

The annuals will be now mostly in flower, and will be a fine addition to the borders, particularly the double asters, new scarlet zinnia, new long-spiked amaranthus, &c. The new scarlet zinnia is exceedingly showy; among the annuals, the yellow sweet sultan is particularly deserving of notice: its blossoms are of a pure yellow, and exquisitely handsome. *Lobèlia bicolor* and *Clintònia élegans*, somewhat similar in appearance, are charming plants, and form brilliant little patches of silver and blue when planted in a light rich soil.

For covering fences, and hiding disagreeable objects from the garden, we do not know of a better plant than the *Clématis virginiàna*; though indigenous to our woods in the vicinity, yet it is particularly deserving of introduction into every garden for the object just mentioned; they are not only pretty, but the feathery appearance of the seeds is highly ornamental until the vines are killed by the chilling frosts of winter.

Bignònia rádicans must be protected during winter, or the shoots will, generally, be so much injured from the cold that they will not produce bloom.

ART. IV. *Some Remarks on the Tree Pæony (Pæonia Moutan), including its history, introduction into England, the production of new seedling varieties, propagation, cultivation, &c. By the CONDUCTORS.*

(Continued from p. 338.)

THE tree pæonies are at once distinguished from the herbaceous ones by their suffrutescent stem; their shining pale green leaves, glaucous on the under side. The flowers appear earlier than the herbaceous species, and remain in beauty but a short time. We have never seen but three varieties in collections in this country, and we are not aware of any others existing, unless we except a seedling raised by the Messrs. Prince, nurserymen, Flushing, L. I., which is enumerated in their catalogue of plants. At what time the first plants were introduced to this country we have not the means of ascertaining; probably fifteen or twenty years ago. The first kind imported was undoubtedly the *P. Moutan* papaveræa var. *Banksiæ*, called the purple tree pæony; afterward the original species, *P. Moutan* papaveræa, and *p. rosea*. None of the other kinds enumerated by Mr. Sabine, or registered in the *Hortus Britannicus*, have yet become sufficiently plenty in England to be in the trade; consequently, they have not yet found their way into our gardens.

Although but the three kinds above named, one species and two varieties, are in our gardens, it may be interesting to our readers for us to give some description of the others, in anticipation of their introduction. The great zeal which is manifested in the pursuit of floriculture at the present time, by many of our amateurs and nurserymen, will no doubt induce them to import plants as soon as they are purchasable of the English nurserymen; and all the varieties will, sooner or later, be found in our collections. The production of seedlings may be also looked for in our own gardens; numerous camellias have been produced from seeds, and we see no reason why this magnificent tribe, more valuable on one account than the former—its hardiness in resisting the effects of our long winters—should be neglected; we have not the least doubt ourselves but that, in a few years, the number of seedling varieties will be as great as those of the camellia a short time since.

In giving a description of the pæonies, we shall be much indebted to a paper in the *Horticultural Transactions*, from which much of the information in the previous part of this article was gathered, by Mr. Sabine. These descriptions are rather long, or we should give them entire, using his own language; we shall

therefore extract only such as is interesting and useful to our readers.

Pæonia Moultan papaveràcea.—This plant has been adopted as the type of the species, in consequence of its having single flowers. It has not been called *papaveràcea*, or poppy-flowered, on account of the resemblance of the flower to a poppy, as many suppose, but because its germens, when enveloped by their membranous covering, resemble a capsule or seed vessel of the common poppy *Papaver somniferum*. When first described in 1807, in Andrews's *Repository*, it was considered a distinct species: it was also considered as distinct from the varieties above-named, by Sir James Edward Smith, in *Rees's Cyclopædia*, and adopted as such on the ground of a supposed specific dissimilarity, founded on its germens being always enclosed by a membrane; but it is now considered that this circumstance would appear in the varieties if the seed vessels were not multiplied beyond their natural number. The flowers are sometimes semi-double, but this does not frequently happen unless the plants are old and of strong growth; their expansion is about ten inches, sometimes more; the petals are very large and broad; they spread out, but are not reflexed; they are white, with a deep purple spot on the lower part (or base) of each petal; the spots are rayed, in lines about an inch and a half long, from the centre, forming a brilliant and rich star in the middle of the flower: the edges of the petals are a little jagged. The anthers are yellow, and are very conspicuously interposed between the dark spots on the petals and the deep purple case of the germens, the stigmas appearing united at the top of it. The germens are stated by some writers who have described them, as being six; but five is the usual number. The blossoms emit a rather unpleasant odor, common in many of the *Ranunculàcæ*, more particularly in all the tree pæonies. It has been figured in the *Botanical Magazine*, t. 2175, and Loddiges' *Botanical Cabinet*, t. 547. The foliage of the plant is distinguished from the variety *rosea*, by its petioles being tinged with red, and the folioles a darker green; the leaves of the *Banksiæ* are similar, in having a tinge of red on the petioles, and in the darker hue of the folioles, but those of *papaveràcea* are generally larger. The largest plant of this species in England was lately growing at Wormleybury, the seat of Sir Abraham Hume. It was introduced in 1802, and flowered for the first time in 1806. In 1826 the plant had attained to a great size, forming a bush of *forty feet* in circumference and seven feet high. In the month of April it is covered with its splendid flowers, and in the year last named, it produced six hundred and sixty flower-buds, one hundred and thirty of which were picked off in order to increase the size of the remaining flowers. At the time Mr. Sabine's paper was written it was believed that no

plant of this species had ever been imported alive into England, except the one above spoken of; and, if this supposition is true, the whole stock now existing in Europe, and indeed in this country, has been raised from this.

The largest plant of this species in our vicinity is, we believe, in the fine collection of J. P. Cushing, Esq., Belmont Place, Watertown. This plant was formerly in the possession of Mr. William Lathe, of Cambridgeport, who imported it from England, about nine or ten years since. He informs us that it was the first plant that flowered in Massachusetts, and probably the first in New England. It is grown in a pot, and generally receives the protection of the cellar or green-house during the winter. In the spring of the past year it expanded four of five of its magnificent blossoms. We do not know of any large plants growing in the open air; but the nurserymen in the vicinity have plants which have stood the winter without any protection. This species seeds freely if the stigmas are properly impregnated.

Pæonia Moultan papaveracea var. *Banksiæ*.—This variety is more common in our gardens than the species just described. It is a very magnificent plant, and some of the blossoms that we have seen were of monstrous size. It was introduced in 1789, and was the first kind imported into Europe. It flowered for the first time in the year 1793. The flowers are large, very double and spreading, measuring in expansion from four to eight inches in diameter. The number of the petals varies according to the strength and health of the plants; sometimes they are so double as to force the calyx to turn back on the peduncle. Frequently the flowers are produced with few or no petals at all; and again many are intermediate between that state and the fullest flower. The petals are of light pink color, fading, as they open, to a faint blush, or white, towards the edges, and at the base deepening to a purplish red: the dark color is sometimes shaded into the pink, at others running into it in rays or featherings. The outer petals are large, the inner ones gradually becoming smaller to the centre of the flower, where they assume a deeper purple tinge, and are much jagged or broken at their edges. The germens are thickly clustered together, around which many yellow anthers appear, which are conspicuous when the flowers are not very double: when the flowers are full double, the anthers and petals spring out together from among the germens, and the petals are often considerably longer than those springing from the outside of the latter. Variations take place in the size of the flowers in the same season and on the same plant,—the older plants, as we have before intimated, producing the finest blooms. When grown in green-houses or conservatories, the color of the flowers is lighter than when they are fully exposed to the air. The blos-

soms give out a faint, generally, disagreeable odor. This variety is distinguished from the *ròsea*, in the red color of the petioles and the darker green of the folioles; from *papaveràcea* it is less distinguishable; the foliage is however smaller and coarser, with obtuse terminations and a more rugose surface. It is figured in the *Botanical Magazine*, t. 1154, which plate, however, is said to have been incorrectly colored. It was introduced to France by M. Boursalt, in 1801, and soon after flowered in the garden of the Empress Josephine, at Malmaison. We should be glad to learn the date of its introduction into this country; and if this article should meet the eye of any amateur or nurseryman who can inform us in regard to the time that either this or the *papaveràcea* was imported, we should feel much gratified for the information. At the present time many fine plants are to be found in various collections in this vicinity. It was introduced to England through the exertions of Sir Joseph Banks, from whence it takes its name. Many plants of this variety have been imported from China: it is probably more common there than any of the other kinds. In 1832 a plant was growing in the garden of Lady Stapleton, at Grey Court, Henley on Thames, in England, which had been out in the open air about fourteen years; it measured five and a half feet high, twenty-seven feet in circumference, and produced two hundred and thirty flowers. It is a very beautiful plant, and should be in every garden, however small.

Pæonia Moultan papaveràcea var. *ròsea*.—This variety we believe has never yet flowered in this vicinity; at least we have never seen it in bloom. Plants are in but few collections, and those that exist are quite small. Mr. Sabine describes two varieties; one as *ròsea semiplèna*, and the other as *ròsea plèna*. But as there seems to be some doubt whether they are not one and the same plant, we shall only describe it under the name of *ròsea*. The Messrs. Loddiges question the authority of two distinct varieties, and, from what we can learn, we are induced to abide by their judgment. The original plant was imported in 1795, for the late Mr. Hibbert, and flowered for the first time in 1796. The flowers are as large as those of *Banksiæ*, of a uniform rich pink, the edges of the petals becoming pale after a time. The outer petals are large and broad, notched deeply in the centre, and with crisped margins: the inner ones are long and narrow, much jagged at the edges, very numerous, and rise in the middle of the flower to a considerable height; the stamens appear mixed with the petals, and the germen is included in a membranous sheath. The scent of the flower is said to be agreeable. Double and semi-double flowers are frequently observable on the same plant, and sometimes the whole of the blossoms produced in a season are semi-double. The first year the plant blossomed the flowers were nearly single. Since, how-

ever, they have been very double, with occasional exceptions. The Messrs. Loddiges, who published a figure of this variety, from a plant in their possession, state that they received it originally from Mr. Hibbert, and that it always produces semi-double flowers. Until Mr. Sabine's paper appeared, the two kinds above spoken of were always considered identical. There is a variety, most common in English collections, with semi-double flowers; but when we take into consideration the fact, that in some seasons Mr. Hibbert's plant produced all semi-double ones, it is scarcely worth while to describe them as distinct.

We hope soon to see this variety in bloom: we saw a small plant, last fall, in the collection of Mr. Wilder, that showed a weak bud, which we presume did not expand, or we should have heard of it at the time. In the fine collection of plants of Col. Perkins, at Brookline, is a plant which was imported direct from China: it has flowered once or twice, though we have never had the pleasure of seeing it in bloom: we have understood, however, that it is the *rôsea*. We observed it once in bud, but we are inclined to the opinion that it is some other variety. It is certainly different from *Banksiæ*; perhaps the *P. Moultan* var. *Rawesii* of Sabine.

Pæonia Moultan papaveracea var. *Humei*.—A variety slightly different from *Banksiæ*. It was formerly considered identical with it, and we have some doubts about its possessing a claim to a distinct name. A figure of it is published in the *Botanical Register*, t. 379. Mr. Sabine states that it is "very near" *Banksiæ*, only differing in having longer and thicker peduncles, blooming a fortnight earlier, and more abundant in petals. It was imported in 1817, and presented to Sir Abraham Hume.

Pæonia Moultan papaveracea var. *Rawesii*.—This variety was brought from China, in 1820, by Capt. Rawes, from whence it derives its name. The plant was given by this gentleman to Thomas Cary Palmer, Esq., of Bromley, in Kent, in whose garden it produced a premature bloom in 1825. The bracts are longer and more conspicuous than in any of the other varieties. The calyx leaves, instead of enclosing the bud in a globular form, are twisted up so as to come to a point at the top. The petals are pale, very slightly tinged with pink, and have a very satiny appearance: they are about twelve in number, and much lacerated at the edges; the flowers, when fully expanded, measure about seven inches across; the filaments are purple, and the anthers clustered closely round the germens, which are six in number. The foliage is stated to resemble an herbaceous pæony; the leaves are smaller and darker than any of the other kinds; they are similar in form, though the terminating foliole is deeply divided, often unequally, and sometimes the upper leaflet is cleft to its base. The peculiar characteristic in this variety, of the calyx leaves en-

closing the bud so as to come to a point at the top, was, if we recollect right, observable in the plant before mentioned as existing in Col. Perkins's collection; but until we have seen the flowers, which we shall endeavor to the coming season of its bloom, we shall not say any thing more respecting it.

The above plants were all imported from China, and were the only ones which had produced bloom, in 1826, in English collections. No information of the introduction of any new kinds, since that time, has come to our knowledge. In Loudon's *Hortus Britannicus*, all the varieties, ten in number, are stated to be from China. This is an error; three of them are English seedlings, and one name is probably repeated twice, making in the whole only nine, the same number as described by Mr. Sabine. It will probably be some time before these seedling varieties will be introduced; but we will give a brief description of them, that their merits may be better known.

The plants were produced in the garden of the Earl of Mountnorris, from seeds which were saved from the *papaveræa*. They were sown about the year 1817 or 1818; three plants came up the year after they were planted, each of which flowered in 1825 or 1826. One is stated as a very distinct variety—the two others to approach each other so nearly, that they can scarcely be considered as sufficiently distinct to be separated. The following are the names:—

Pæonia Mou'tan papaveræa var. *cárnea plèna*.—The blossoms of this variety are large, very double, in appearance similar to *Bánksiæ*: the petals are smaller and more abundant than in the latter variety, and they have also a rich purple-rayed spot at the base of each, like the *papaveræa*; the ground color is a delicate purplish pink. This variety is one of the two plants which has just been stated as being nearly alike in appearance.

Pæonia Mou'tan papaveræa var. *álbida plèna*.—The ground color of this variety is very pale; not white, but suffused with purple. The germens are numerous, and the blossoms are larger than the last named variety. The growth is strong and vigorous.

Pæonia Mou'tan papaveræa var. *Anneslèi*.—A very distinct and pretty variety, named by Mr. Sabine in compliment to Lord Mountnorris, who was the first who raised and brought into notice seedling varieties. The flower is small, not exceeding four and a half inches in diameter. It is nearly single; a flower containing eight or nine petals, which are heart-shaped, slightly jagged at the margin; the color is a rich purplish pink, shaded into a darker purple at the base of the petals, which extends up the centre of each to the notch at the edge. A drawing of it is appended to Mr. Sabine's paper. (*Hort. Trans.* plate 7.)

In addition to these, we have lately noticed, in the *Gardener's Magazine*, that Lord Mountnorris has a number of seedlings;

one of these flowered in the spring of 1834. It is figured and described in *Sweet's British Flower Garden*, t. 238, as follows:

Pæonia Moultan papaveracea var. *variegata*.—The plant is a low-growing bushy kind, branching from the ground, and scarcely woody. The petals are white, stained with a deep rose color in various parts; the base marked with numerous radiating streaks of violet and purple; the anthers are yellow; the flowers measure about six inches in expansion. It was raised from seeds of the *papaveracea*, which it is supposed had been accidentally fertilized by some of the herbaceous species.

The only other variety of which we have any particular account is figured in the *Botanical Register*, t. 1771, viz:—

Pæonia Moultan papaveracea var. *lâcera*. The petals of this variety are much cut and gashed, and distinctly bordered with a narrow edge of carmine. It was raised from seeds of either *papaveracea* or *Banksia*, and flowered for the first time in 1834, the plant being then only three years old. It is stated by Dr. Lindley to be a very splendid plant. We have before noticed this in our Vol. I. p. 421, but have here repeated the description, that our readers need not have occasion to turn to that for information respecting it.

The seedling alluded to in the first part of this paper, as enumerated in the catalogue of the Messrs. Prince, is stated to be a variety of the *papaveracea*, from which we infer that it was raised from seeds of this species. It is called Prince's new single purple.

Since writing the previous part of this article, and after it was in type, we have received some information respecting several new seedlings which have been raised and flowered in France.

We have stated our opinion, that but a few years would elapse before the varieties of pæonies would be nearly as numerous as those of the camellia were a few years since, and it seems that our anticipations are already about to be realized. In the catalogue of plants, for 1836, of the brothers Baumann, of Bollwiller, on the Upper Rhine, who probably possess one of the finest nursery collections on the continent, we find enumerated ten varieties, six of which we believe are seedlings of their own; and we have understood by a gentleman, who lately received a letter from the Messrs. Baumanns, that they have had a most magnificent seedling, which flowered, for the first time, the past spring, and also that they have many more seedling plants not named, and several which have not yet blossomed. We have no doubt but the number of new kinds will soon exceed even our seemingly great expectations.

It will be gratifying to our readers to learn that several of these new varieties are in the fine collection of Mr. Wilder, of Hawthorn Grove, Dorchester. The plants are very small, and will

not probably bloom this year or two; not in perfection until they are well established and acquire a good size; but that they should be already introduced to our gardens is a fact of some importance. The following are the names of the new kinds in the catalogue alluded to for 1836:—

<i>Pæônia Moûtan</i>	<i>papaveræca</i>	var.	monstruosa álba pleníssima.
"	"	"	" lilacina pleníssima.
"	"	"	" lilacina semiplèna.
"	"	"	" simplici.
"	"	"	" purpùreo violáceo plèna.
"	"	"	" plèna.

The seedling which flowered this season, for the first time, has a blossom of an exquisite carmine color, suffused with a deeper tint. The plant was raised from seed eight years since; it is very difficult to propagate, and will not probably become common for some years.

These are all the seedlings of which we have as yet had any account. Many have been raised by the English florists, although we have not heard of any that have blossomed, except those named in this article. Both the *Bánskia* and *papaveræca* seed freely, if the flowers are duly impregnated, but without which they rarely produce any. The plants come into flower from three to eight years from the seed, and the zealous amateur may perceive the results of his experiments as soon in this tribe as in the camellia.

The tree pæonies may be successfully cultivated either in the open air, or in pots in the conservatory, as they are hardy enough to endure our most severe winters without protection; and although we have a strong desire to see the plants displaying their brilliant blossoms among the other shrubs of the garden, we would not by any means be understood as wishing them to be excluded from the green-house, more particularly from the conservatory. In either of these places they are exceedingly valuable plants, as they can be brought into bloom at any time from January to May; and when there are several plants in a collection (as there should be in every good one), the flowers may be produced continually through that period. In the open air the plants will be subject to occasional injury from early frosts, and their blossoms soon spoiled of their beauty, in warm situations, by the hot rays of the sun; but the latter may be prevented by planting on a north or west border, or in some shady aspect, where they will remain in perfection for a great length of time. In the conservatory individual flowers are probably shown to the best advantage; as they are not exposed to the chilling winds of spring on the one hand, nor the sun's heat on the other; the beauty of the foliage is also preserved. Individuals who do not possess any structure for wintering plants can have them in the border, while those who do

should have them in both situations, certainly in the latter. A good method to flower the flowers in perfection would be to give the plants a good soil and an open situation, and erect over them a temporary light frame: this could be covered with glass at the period of their blooming, and their splendor preserved for a great length of time.

The plants are propagated by several different methods, viz:—by seeds, suckers, layers, division of the stem, cuttings and grafting. Their increase was attended with considerable difficulty when they were first introduced; and this, as we have stated, has been one cause of their high price; but this difficulty has been much lessened by experience. By seeds they are only produced for obtaining new varieties, as the plants are longer attaining a flowering state than by any of the other modes: the *papaveræa* and var. *Banksiæ*, by impregnating one with the other, or either with any of the varieties, will probably produce plants different from their parents. Of the systems of propagation we shall speak of each separately; first,

By Seeds.—We have never read any account of the method of raising the plants from seed: but we presume they may be sown in the same manner as camellia seeds; that is, to plant them in the fall of the year, just after they are ripe, in small pots, which should remain in the green-house or frame until spring; they may be then placed in a hot-bed, when, perhaps, some of them will come up; such may be taken out and potted when they have made one growth, and the pots allowed to stand till the remainder vegetate.

Suckers.—These may be often found growing from old plants, especially when they are standing in the open border; in this situation, however, they are not so easily detached as when the plants are in pots: in the border the operation should be performed by taking away the soil carefully from the roots, and, with a sharp knife, cutting the sucker off, with a portion of the root: the wound should be rubbed over with some dry earth, and the plant immediately potted in a soil composed of loam, peat and sand. When the suckers spring from plants in pots, the balls should be turned out and be divided carefully, leaving a piece of the old root attached to each sucker; these should be potted as just mentioned. Keep the plants in a shady place for a few weeks: the best season for performing the operation is in the month of September.

Layers.—The method of propagating by layers is very simple; the plants should be standing in the border. In the spring of the year, when the buds begin to start, bend down the outer shoots into the soil, and, with a wooden peg or hook, fasten them into it; before doing this, a tongue, or longitudinal split, should be

made in the inner side of the bend; this operation should be done with very great care, as the shoots are extremely liable to be broken where they bend; make use of the same soil as for suckers. Layers are not generally rooted sufficiently to be detached from the old plant until the expiration of two years. A new system of increasing the plants by layers was a few years since made public. It consisted in taking away, in the month of February, a ring of the bark, about a sixteenth of an inch wide, between every bud on each shoot, in the manner common ringing is performed on trees. In this way each bud will occupy one inch of the stem between the rings. The stems, when thus prepared, should be laid down horizontally, about three inches under the soil, leaving only the leading bud at the end of each branch out of the ground. In six months each bud will have made a vigorous shoot and radical fibres; in August carefully separate each plant, and pot them as we have recommended for suckers. We do not know whether this mode is extensively practised or not.

Division of the Stem.—This operation is, we believe, only practised by the Chinese; but as it may be interesting to our readers to know how it is performed, we will detail the method. An old plant is selected, and the stem is regularly split into four or six equal portions from the top to the bottom, even among the roots; these divisions are kept separated until the wounds begin to dry, when the middle of the stem is filled with a sort of plaster made with mortar and rich earth, with which is mixed a small quantity of sulphur. The operation is performed in the spring, and the plants suffered to remain until autumn, when each division is separated with the portion of the root belonging to it.

Cuttings.—To increase the plants by cuttings is more difficult than by layers or suckers. They should be taken off in August or September, with a portion of the old wood attached, and planted in pots in a compost of loam, leaf mould, and a large portion of sand; drain the pots well, and plant the cuttings close to the sides of each; cover them with bell glasses, and place them in a shady situation for a time, until winter, when they should be sheltered from frost, and in February or March assisted in their growth by the aid of a hot-bed. After this they may be treated like established plants. Another method is, to take off cuttings an inch in length, in the manner of vine cuttings, with a bud on each; slit up the stem behind and take away the pith; insert them in pots, three inches under the soil, and plunge the pots in an exhausted hot-bed, where there is a temperature of about sixty degrees. In two months they will have rooted and made young shoots.

Grafting.—This is not generally performed on the shoots of the

shrubby ones, unless there is a greater stock of the more common kinds than is wanted, and it is wished to increase a rare variety. The operation is performed in the manner called crown grafting. A few weeks before grafting, the earth is drawn away from the roots; just before the plants make their autumn growth, it is drawn up again, and the operation performed. The plants must be protected from frost during winter, and in the spring they will begin to grow; they are afterwards treated as established plants. A method was, a few years since, communicated in the *Gardener's Magazine*, of grafting the shoots on the herbaceous species *P. officinalis*. It is as follows:—take off the cuttings of any of the tree kinds; then slit the tuber, from the crown downwards, about two inches; form the scion like a wedge, insert it into the slit in the tuber, fitting the barks on one side as exactly as possible; bind them well together with strong bass, over which put a brass wire, to prevent the parts spreading when the bass is decayed. They are then potted deep enough to allow the earth to cover the tuber, and set in a cold frame or pit, kept close and rather dry, and shaded from the sun for a month. Protect from frost during winter, and afterwards treat them like old plants.

In the cultivation of the plants very little care is needed. If growing in pots, they may be placed in a back shed, or any situation until wanted to flower. The only care requisite is, in not allowing the plants to start suddenly into growth, and bud prematurely. If standing in the green-house, they should be kept away from the flues, or hot water pipes, as heat is injurious to the plants; when in bloom keep them in a shady part of the house, and the beauty of the flowers will be longer preserved. After the flowers have faded, set the plants in the open air; repot them every year. The compost, as the plants get stronger, should be mostly loam, with a little leaf-mould. Plants in the border only require a good loamy soil, and occasional prunings.

We have thus, though we fear at too great length, given our readers a full account of the tree pæony. We shall endeavor to keep in view the production of all new varieties, and all that are worthy of note will be speedily made known through our pages. In the mean time we hope the amateur florists of our vicinity will endeavor to produce from seed new and choice sorts. Patience is only wanting to ensure to the grower a rich reward for his labors. We would also request those persons, who have the facilities, to procure plants from China, in the hope that some of their *wonderful* sorts, if such they have, may be accidentally introduced.

ART. V. *Calls at Gardens and Nurseries.*

Belmont Place, Watertown, J. P. Cushing, Esq.—August 14. The late dry weather has greatly checked the growth and bloom of many plants, and we consequently found the garden less attractive than it usually is at this season of the year. The dahlias, owing to the unusual drought, have not blossomed so well as was expected. We noticed several plants trained to a trellis for peach trees, which displayed finer flowers than some of those tied to stakes; this we presume was in some degree occasioned by the pruning which they must necessarily have in such situations. There is a fine collection in this garden; nearly a hundred sorts having been added this season, among which are many of the most superb ones; such as *Bride of Abydos*, *Wells's Zarah*, *Harding's Bride*, *Viscountess Beresford*, &c; should a good fall of rain succeed the present dry weather, and the frost hold off until late in October, we may anticipate one of the finest displays of dahlias ever seen. Among the numerous annuals which adorn the border, none make a greater show than the double China asters; there are here two rows on the border, in front of the forcing-houses, which present one mass of flowers of varied hue; in front of these, and close to the box edging of the walk, a corresponding row of *mignonette* extends the entire length, and perfumes the whole air of the garden with its delightful odor. We are often surprised to see how little attention most persons give to mixing in with the showy plants of the border a good abundance of fragrant flowers. Though the blossoms are frequently not gorgeous or very ornamental, they add much more to the delight of the garden than others which attract only by their brilliancy: sweet *alys-sum* is very pretty planted with *mignonette*. In different parts of the border we noticed a great many plants of the old China monthly rose, covered with a profusion of blossoms: in the rich soil of this garden the old roots, which stand out the year round, throw up strong shoots to the height of twenty or thirty inches, with large clusters of buds, to the number of twenty or more in each. The flowers are of short duration under our hot sun, but this kind is so prolific of bloom, that there is scarcely a day in the summer season but what there are a greater or less number expanded. We here also saw a strong plant of the *noisette* rose, *Smith's yellow*, in bloom. It stood out during last winter, and although the shoots were killed down to the surface of the soil, the plant has thrown up a succession of new ones, to the height of three feet, with quite large clusters of buds; on some stout suckers we counted eight or ten. Mr. Haggerston, however, informs us that the flowers do not expand freely, many of them not opening at all. We have observed this defect in plants in the green-house; occasionally a fine flower fully expands, but the generality of the buds rarely open. Heat does not seem to remove this habit, and if it is a free bloomer in the climate of England, of which we have never heard to the contrary, it must be the effect of our hot sun and drying winds. We are sorry to see that this exceedingly fine variety is likely to show a defect which will prevent its being generally grown. We hope some of our amateur florists will try to discover the cause of this, and, if possible, means to render the flowers perfect.

We were glad to see the great number of *kalmias*, *rhododendrons*, *azaleas*, *magnolias*, and other hardy American shrubs which have been planted in this garden the past spring; although the season has been so dry, they are doing well, and show numerous flower buds. They are

planted in the border facing to the north, and are shaded part of the day by the different large trees in the rear of the house adjacent to the garden wall. Mr. Cushing is displaying good taste in thus ornamenting his grounds. The borders are kept well cleaned, and neatness prevalent in every part.

In the graperies there is a very good crop of fruit. A very large number of varieties has here been collected from different sources, and many of them have produced a few clusters this season; Mr. Haggerston being unfortunately from home, we were deprived of the opportunity of having the different kinds, with the names of each, pointed out. We intend, however, if other engagements do not prevent us, to visit this place again before the fruit is cut, in order to give our readers some information respecting such varieties as are worthy of cultivation, and such as are not. The wood of this year is exceedingly well grown, and is ripening finely: the red spider has been very troublesome this season, but we were glad to perceive that they had been mostly banished from these, as well as from the other departments.

The plants remaining in the green-house were principally the fine orange and lemon trees, some palms, &c. The fine *Passiflora alata* has extended itself over nearly one third of the roof, and was covered with hundreds of buds and blossoms. Several *hedychiums* have been in bloom, and a fine plant of *H. Gardnerianum* was throwing up a strong spike of buds. Six or eight plants of *Amaryllis Belladonna* had each expanded an umbel of its exquisitely lovely flowers; we noticed that the pots were set in pans of water; this species is one of the handsomest of the tribe, and should be in every collection. A great number of pots of that pretty and delicate plant, *Trevirana coccinea*, were flowering profusely; this is generally classed among the stove plants, but it does well here in the green-house. *Ixora rosea* had a corymb of its flowers expanded. *Stapelia hirsuta*, and another common species, was in bloom; these are extremely curious plants. The Chinese guava tree, *Psidium chinense*, was here in a fruiting state; many of the guavas are worthy of cultivation for their beautiful foliage, particularly *P. Cattleianum*, as also for their fruit.

In the stoves the pine plants are growing vigorously, and look healthy and strong. Some of them have attained to nearly a flowering state. Two fine ipomæas are in this collection, one of which we have before noticed, *I. p.* 435, and the same, we believe, as in Mr. Lowell's, *p.* 350; the flower of one is a much deeper color than the other; that which we called *I. insignis* last season, Mr. Haggerston informs us agrees with the *I. paniculata* figured in the *Botanical Register*, *t.* 62, and the other proves to be *I. gossypifolia W.*, *I. insignis* of the *Rot. Reg.*, and the same as we have heretofore called by the latter name. We find, upon looking over the *Hortus Britannicus*, that *paniculata* is described as pink, and *insignis*, purple, which agrees with the colors of the flowers; they are both beautiful, free flowerers, and rapid growers. *Combretum purpureum* continues in flower the whole season. *Crinum augustum* was throwing out a huge flower stem. A very handsome evergreen plant, lately imported from China, *Allamanda cathartica*, has been in bloom for some time: the flowers are very bright yellow; it belongs to the natural order *Apocyniaceæ*. *Nymphaea pigmaea* and *cærulea* have been in bloom all the season. A new *althæa* from China, with large double white flowers, was exceedingly showy; probably it will stand our climate out, and, if so, it will prove a valuable shrub. We noticed a single *hibiscus* allied to the *Rosa sinensis*, which was received from England; it is a very desirable plant; the double varieties, of the species just named, are in fine bloom. A great many plants have been imported,

direct from China, during the past season, which we shall mention hereafter.

Two of the pits in the forcing ground are filled with some elegant plants of the Providence pine; they were received, we believe, from Trinidad, last spring, and are now making a very strong growth. Lettuces, &c. in the frames, had just been planted out, and a great number of pots of Keen's seedling strawberry had been taken up for forcing. Nearly all the green-house plants have been repotted for their winter station, and they look exceedingly well. On the very large single camellia in this collection, now standing in the summer residence of the green-house plants, upwards of *seventy* inarchings have been made, including eighteen or twenty kinds. Some new ericas have been added, which we shall notice when in flower.

Some improvements have been made in the grounds around the residence, but we have no room to notice them at this time.

Oakley Place, Wm. Pratt, Esq.—This place is in excellent order. The avenue up to the mansion has been well cleaned, the edges of the grass cut, and the trees, which border it on each side, trimmed of all unsightly branches. Not much that is new has been added to the garden the past season: Mr. Pratt only resides here for a few months in the summer, and does not, we presume, feel sufficiently interested in gardening, to enrich his collection to any extent. In the forcing ground we saw some fine melons, in frames, of good size.

In the green-house the grape vines have produced a few clusters. It will be recollected that the green-house is a new one, and the vines, mostly, only one year old. They have made a fine quantity of wood for a good crop of fruit next year. On the back wall, a plant of *Wistaria Consequana*, the largest we have ever seen, was making a rapid growth, and will probably bloom next season; we have before urged upon all lovers of beautiful plants the cultivation of this; Mr. Pratt, Jr., by whose direction this plant was set out, informs us that he saw nothing that was more beautiful in any of the gardens in England: it there covered walls or trellises in the open air in almost every garden, and produced its large lilac-colored bunches of flowers in great profusion all summer. It is hardy in our climate.

The garden here, as well as at Mr. Cushing's, has suffered exceedingly from the dry weather; dahlias bloom but sparingly compared with seasons in general, and the flowers that do open are, many of them, semi-double. Some new varieties have been added this year, but not to so great an extent as at many other places: we were deprived of the gratification of seeing many flowers, or of giving our readers any account of their beauty, partly on account of the drought, and partly that nearly all of them that were open the day previous were cut. *Bignonia grandiflora* has flowered rather sparingly the past season, on account of the cool weather. A species of lotus, probably *L. jacobæus*, raised from seeds, was flowering beautifully, planted in the border; the blossoms are dark brown, and are produced in clusters of two or three in each; the foliage contrasts very prettily with the flowers. A new hibiscus, raised from seeds received from the West Indies, has flowered, and was very beautiful: the foliage is similar to *Rosa sinensis*. That fine tea rose, *Strombio*, has bloomed here; the plants were received from France the past spring. We hope the collection of plants, both hardy and tender, will be increased by the addition of new species and varieties.

There are some fine varieties of pears at this place, many of the names of which have been lost; the trees, most of them, are loaded with fruit. Some of the specimens have been presented to the Mas-

sachusetts Horticultural Society, but we believe the kinds have not been distinguished.

Botanic Garden, Cambridge, Sept.—We have never observed this garden when neatness was so generally prevalent. The borders were quite clear of weeds, and the appearance of the plants highly improved. This establishment has suffered sadly for want of more assistance; but we hope this will no longer be the case. It is certainly desirable that a garden bearing such a name as this, and attached to one of our first institutions, should be kept in a better state than it has been of late years.

The dahlias here have blossomed uncommonly well this season; composed as the soil is, in this garden, of a stiff loam, inclining almost to clay in some parts, it seems astonishing. The variety is large, though not including near so many new kinds as many other collections; but there was a great profusion of flowers on many of the fine old sorts; Mr. Carter has raised some excellent seedlings. *Magnolia obovata* has here produced a second crop of flowers. Some fine new seedling phloxes have also been raised here; but we had not the time to walk through the grounds.

In the houses *Passiflora racemosa* var. *princeps* was in bloom. *Echites grandiflora* had also some flowers expanded. *Vallota purpurea*, many pots of, was beautifully in bloom; we do not often see plants so well grown as these were; nor is it in many good collections, to which it should not be a stranger; it is of easy culture, and certainly it is one of the most elegant of the *Amaryllidaceæ*.

Mount Auburn Cemetery.—The plants were nearly all killed here by the very severe frost in the early part of the month,—a few dahlias, standing in some of the lots upon the grounds, in high situations, where they were sheltered by the foliage of the trees, having alone escaped destruction. Around the ponds, and in what was formerly the garden, every thing in the least tender was totally destroyed. We are sorry to see the garden so much neglected. When this place was under the control of both the present Corporation and the Horticultural Society, it was kept in good order, and a very showy collection of plants ornamented the borders; but latterly it has been suffered to run to weeds. We have understood that it is the intention of the proprietors of the cemetery to plant the garden with all sorts of forest trees, and, eventually, to adapt it to the purpose of laying out lots; this should not, however, prevent them from giving some attendance to the garden, while it exists as it is at present. It might, with very little care and expense, be made highly ornamental, and the quantity of flowers which could be cultivated on its limits would be well adapted for the purpose of furnishing such of the proprietors as might desire it, with an abundance of flowers, in the form of bouquets. Would it not be a subject of some consideration whether, at present, the garden site should be planted with forest trees? that it might be converted to the use we have just mentioned. A good distribution of shrubs, both evergreen and deciduous, would beautify it in a high degree; and if, at some future time, it should then be wanted for cemetery purposes, these would in no way interfere with the disposition of the grounds. An interesting and delightful place might thus be produced, combining the beauty of the flower garden with the quiet and retired character of the place, and form a pleasant promenade after a tiresome walk through the high and uneven surface of the other part of the grounds. Mr. Russell, the present superintendent, is every way qualified to do justice to the place; and we have no doubt that it would be, at once, worthy of his skill, as well as of the taste and liberality of the proprietors of the cemetery.

The number of lots sold to new proprietors this year, up to the present time, is very great. Many new tombs have been erected, and the

general appearance of the lots is exceedingly neat. We shall at a future time speak of some of the particular lots, and of the taste displayed in their embellishment; at present we have not the opportunity to do so. A judicious thinning of the trees and underwood remains yet to be performed; but we hope at the end of another season to see many good improvements effected in the grounds.

Garden of Mr. J. Towne, Snowhill Street.—We have not, for a long time, been so highly pleased as we were with a visit which we lately paid to Mr. Towne. His garden limits are confined almost wholly to a small green-house, which he had erected over the back buildings attached to his house, the entrance to which is through the parlor. In this small space Mr. Towne has collected together a great number of plants, of the most beautiful kinds, of heaths, diosmas, and other similar Cape and New Holland shrubs, that we have ever had the pleasure of seeing. The number of species and varieties of heaths or ericas amounts to upwards of fifty, and finer looking or better grown plants, we do not hesitate to say, are not to be found in any other collection in the country. They are one perfect mass of verdure, and the strong and vigorous growth which many of the plants have made the past summer, would astonish any one who is at all acquainted with this tribe, more especially those who have adopted the opinion that our hot sun and drying winds were altogether prejudicial to their cultivation. Some of the most vigorous growths are upwards of twenty inches in length, and not a single yellow or sickly leaf can be seen the whole distance: a few species which experienced English cultivators have found difficult to manage, seem here to flourish without any particular care.

It has often been said that heaths, as well as most other plants, do better when removed to the open air in the summer season, than when remaining in the green-house: but we feel fully convinced of the untruth of this statement; and no better proof is wanting than an inspection of Mr. Towne's plants. They now stand where they have stood the whole summer, and those in our own collection, or in any others that we have observed, will not compare with these in the deep green color of their foliage. His plants are not drawn up in the least; but exhibit that stout and luxuriant growth, which it is natural to suppose they possess, when flourishing in their native habitats. That most excellent cultivator of heaths, Mr. McNab, recommended, in his valuable treatise on this tribe, the importance of keeping the plants in the green-house the year round; and although our climate is so essentially different, the same management should be pursued here.

Of diosmas there is here several species. *Metrosidèros semper-flòrens* had expanded a fine blossom. *Melaleuca hypericifolia* is coming into flower; there are also several other beautiful species in the collection. *Tecoma capensis*, growing in a pot, has been in bloom all summer. We here saw coming into flower what we supposed to be *Portulaca Gillièsii*, as Mr. Towne received it from Philadelphia for a new species. It is a very desirable plant. Many new things Mr. Towne pointed out to us, but we have not room to enumerate them; and as we shall undoubtedly have the pleasure of seeing them when in bloom, an account will then be more interesting. Three or four ardisias, several cistuses, some leptospermums, acacias, among which is a beautiful plant of *A. decurrens*, brunias, and indeed many quite rare plants, are in this collection, which is one of the richest, according to the size, in our vicinity. Mr. Towne is a great lover of gardening, and we wish he had more room to devote to floricultural purposes; as it is, there are few gardens, especially city ones, which afford the pleasure to be derived from an inspection of his.

REVIEWS.

ART. I. *The Gardener's Magazine and Register of Rural and Domestic Improvement.* Conducted by J. C. Loudon, F. L. S., H. S., &c. In Monthly 8vo Numbers; 1s. 6d. each. No. LXXVI. for July.

ART. 1 is "a Notice of the Garden of Canonmills Cottage, the residence of Patrick Neill, Esq., LL. D., F. L. S., &c., with lists of the rare plants contained in, or figured and described from it."

Canonmills Cottage has been the residence of Dr. Neill's family for upwards of a century. It is situated about a mile from the city of Edinburgh, and contains, in all, not more than half an acre and three poles of ground; but in this limited space there is included a greater store of botanical riches than is said to be found in any other suburban garden of even much greater extent in any part of Britain, or, perhaps, in the world.

Annexed is a perspective view of the garden, as seen from the door of the dwelling-house, late in autumn.

Of the rare plants growing in, and those figured and described from, the garden, we shall select only those which are of great interest or beauty, to show our readers how zealous Dr. Neill has been in the pursuit of botany and gardening.

Nepenthes distillatoria. Both sexes of this plant have flowered, and seeds have been matured, from which many plants have been raised.

Euphorbia Poinsettiana Grah. Flowered in Scotland for the first time in 1835. (See p. 294.)

Solandra guttata.

Russelia grandiflora.

Brugmansia sanguinea.

Ceropègia elegans.

Sinningia guttata.

Oncidium papilio.

Renanthera coccinea.

Stanhopea elegans.

Gloriosa superba. This plant has repeatedly flowered here.

Dillenia speciosa—a very large specimen.

The above are specimens of remarkable plants growing in the garden in 1835.

The following have been figured from the garden since 1826.

Fraxinea appendiculata. Bot. Mag.

Gardoquia Gilliesii.

Piptanthus nepalensis. Hooker's Ex. Flor.

Manettia cordifolia. Bot. Mag.

Nierembergia gracilis.

" intermedia.

" calycina.

Tropæolum pentaphyllum. Bot. Reg.

Gaillardia picta.

Philox Drummóndi.

Calliopsis Drummóndi.

Physianthus álbens. Bot. Mag.

A great many fine plants have been described from this garden, in the *Edinburgh New Philosophical Journal*.

A list of animals kept at Canonmills Cottage is given; but this would not, probably, be interesting to many of our readers.

In the spring of the present year a rail-road was projected between Edinburgh and Newhaven, and the line of direction laid down was unfortunately through Dr. Neill's garden. Dr. Neill petitioned parliament on the subject, but was finally obliged to submit. The following is the "Extent of Glass and number of Plants in Pots," as drawn up in his petition:—

"A span-roof conservatory, or cool green-house, thirty feet long, seventeen feet wide, and fourteen feet high, containing upwards of five hundred pots. A stove, or hot-house, twenty feet long, fifteen feet wide, and twelve feet high; above four hundred pots. A vinery, or warm green-house, of same dimensions as stove; three hundred and twenty pots. A large brick-built forcing, or warm pit, twenty feet long, with five double lights; four hundred pots at present—often above one hundred more. A cape bull frame of three sashes; plants in the border. An orchis frame of four sashes; plants in the border. An Alpine frame of four sashes; two hundred and ten pots. A glazed house, ten feet high, for protecting plants in winter. The amount of pots with plants, at present, is above two thousand and thirty; and the number of species and varieties of plants, including trees and shrubs in the open ground, greatly exceeds one thousand."

Dr. Neill is a great lover of gardening. The flourishing state of the Caledonian Horticultural Society, of which he is secretary, is mainly owing to his exertions. Dr. Neill is the author of many valuable papers in the *Edinburgh New Philosophical Journal*, *Nicholson's Journal*, *Magazine of Natural History*, *Gardener's Magazine*, &c.

Art. 2 is a design for a cemetery; but a description of it would not be well understood without the accompanying engraving.

The 3d article is a "descriptive notice, accompanied by plans and sections, of a range of forcing-houses," erected at Evingham Park, Yorkshire.

In general appearance very similar to the elegant range at Belmont Place, though not on so large a scale. It includes a green-house, graperies, and peacheries.

Art. 5, "On the mode in which Hyacinths are grown in the neighborhood of Berlin."

Vast quantities of bulbs are grown in Berlin, and probably before long the number will be almost as great as that grown in Harlem, in Holland. We extract the remarks of the writer, made from a few notes taken when he visited these gardens:—

"You are well aware that the Dutch, of all other nations in the world,

are the most successful in cultivating bulbs for sale. I might say that they carry this art to perfection; but the rapid strides which the growing of the hyacinth has of late years made in Berlin gives me every reason to think that, in a very few years, that city may rank with Holland, both as to quality and number. On the east side of the town of Berlin, within the walls, is a large tract of land, commonly called the Kopenicher Feld, formerly old pasture ground. Here a vast number of market gardeners have of late years established themselves; and among them men of capital and of taste are to be found, who, to enlarge the former and gratify the latter, have betaken themselves to the cultivation of bulbs for the market. Among the most important of these may be reckoned M. Krause, in the Fruchstrasse, who has not less than seven acres planted with hyacinths; and, from a calculation which I made, above one million of flowering bulbs, and half as many seedlings. From the immense number grown of one sort, this field (for so I must call it) has a grand appearance; the colors being so arranged as to resemble a rainbow; beginning with a light shade, which rises gradually to a dark blue, backed with red, which is lightly led away into a pure white, and so on in alternate shades to the end of the field."

The kinds which M. Krause cultivates in large quantities are as follows:

Single Reds.—Amiable Rosette, Gellert, Madame, L'Honneur de Sassenheim, Reine de Rouge, Riche en Fleurs, Rose a la Reine, Aceter, Superbissima rubrorum, La Belle Rose.

Double Reds.—Euterpe, Grossfurst, Hugo Grotius, Il Pastor Fido, Kosenkrantz, Von Flora, Superbe Royal.

Single Blues.—La belle violette, Staaten-General, Appius, L'Ami de Cœur, Manteau, Vulcan.

Double Blues.—A-la-mode, La bien Aimee, Nigritenne, Mon Ami, Duc de Penthèvre, Perle Brilliant.

Single Yellows.—Aurore d'Or, Bouquet d'Orange, Jaune Meveille, La Pluie d'Or, Adonia.

Double Yellows.—Bouquet d' Orange, La Favorite, Ophir.

Single Whites.—Imperale, Vainquier, La Jolie Blanche.

Double Whites.—Hermine, Pass Virgo, Raath Van Staaten.

"M. Krause had also, I observed, about four acres of early tulips in a very vigorous state; the late ones were not in flower. Those which appeared to me to be the finest grown and in greatest quantity, were Duc Van Tholl, Grande Duchesse, Grootmeester Van Maltha, Nit en roode borde, Standant, Tournesol, Rex rubrorum, Beauté Parfaite, Brant Van Harlem, Cerise Royal, Aurora Arachne; with an immense quantity of fine seedlings, too tedious to mention. The next in rank, as a bulb grower, may be reckoned M. Limprecht, in the Koppenstrasse. His collection of hyacinths, though not so large as the last, consists of bulbs, which are extra well grown. M. Limprecht forces, on an average, every year, from twelve thousand to fifteen thousand hyacinths, in pots, for the market. The early tulips were splendid. M. Limprecht has raised a variety of the Duc Van Tholl from seeds, which he calls Duc de Berlin. It is much larger and finer colored, and is said to force better than the original. Both the establishments which I have mentioned are kept in a very orderly and business-like manner. In fact, the market gardeners and florists in Berlin are rather a superior class of individuals: of the former you shall hear more at another opportunity. It would occupy too much room to enumerate here all the different gardeners that have turned their attention to this branch of floriculture, it having become general; but I cannot pass over the collection of M. D. Bouchi, in Blumenstrasse,

it being one of the most select and numerous in Berlin as to sorts. M. Bouchi has long been celebrated as a florist; and, certainly, his garden is worth visiting, not only for the neat and orderly manner in which it is kept, but for the rich collection of auriculas which it contains, and, above all, the original and interesting habits of its owner.

“The Berlin growers generally begin to plant their hyacinth bulbs about the latter part of October, or beginning of November; the ground having been, the previous spring, trenched to the depth of two feet, and enriched with good short dung, which is planted in summer with cauliflowers, kohlrabi, or stocks, the seeds of which are made an article of trade. The bulbs are planted about six inches deep, in rows parallel with the beds; the distance between the rows being regulated according to the habits of the kinds; so that they stand free of each other when in flower. Many fine sorts have been raised from seeds here; and, in general, the seedlings flower the third year. The beds are covered, in winter, with a thick layer of stable litter, which is removed early in spring. The ground appeared to be composed of two thirds of brown sand, with a portion of black vegetable earth; and the subsoil is a moist white sand. Although an immense quantity of hyacinths is required to supply the demand in Berlin itself, yet the greatest part of those grown in that city is sold to the Vienna and Saxony growers. In passing the streets of Berlin, scarcely a dwelling-house window is to be seen that is not decorated with flowering bulbs, from January till May.”

Our readers will perceive, by the latter part of the above extract, how general the taste for bulbous roots is in the city of Berlin. Indeed it is astonishing to notice the enormous number of hyacinths sold in that market, amounting to five times the number that are cultivated in the whole extent of this country. We have often been astonished to notice with what apparent carelessness many persons look upon the beauty of a fine collection of hyacinths; and how lightly their delicious fragrance is estimated. We know of no flowers that repay so well the labor bestowed on their cultivation; and their blooming at a season when there is not a vestige of summer to be seen, unless in the parlor or green-house, their value is doubly enhanced; added to this, their easy growth, the little room they occupy at the window or on the mantel of any house, the long period at which their flowers continue in beauty, and they possess attractions to be found in very few flowers. One reason, we suspect, why good hyacinths are less often seen, is, that most of the number that are grown are procured at auction, and are small, miserable roots, with not strength enough to produce a good bloom; these, in a majority of cases, afford only disappointment to the purchaser, who expected to have an elegant display; and he is thus often deterred from again attempting to cultivate them. On the contrary, if the roots were procured from some responsible seedsman, who receives his annual assortment of bulbs from some house in Holland, on whom he can rely for the excellency of his roots, they seldom fail to disappoint the grower, but generally flower in such beauty as to induce him to give them more

attention, and, when the season again comes round, double his stock. We are certain that if this precaution was taken, we should hear less complaints of the beauty of hyacinths, and of the scanty display they make for the trouble taken in their cultivation.

Art. 6, "on the mode of producing two crops of grapes from the same vines in one year." In this article the writer states that when he took charge of the vines, in April, 1833, he found that his predecessor had forced them since November, 1832: the whole crop in two pits did not exceed five pounds; his method is detailed as follows:—

"In November, 1833, I began to force the west pit; and, by the end of March, 1834, I had a pretty good crop of grapes, according to the strength of the vines, fit to cut; and, by the end of April, all the grapes were gathered. The other pit succeeded. I immediately threw open the west pit, after pruning the vines, and filled the border with night soil. About June, the buds began to push, and they opened strong. I then shut up the pit, and gave very little air, and plenty of water, but no fire; and on December 1834, I had a fine crop of grapes fit to cut, and well colored; besides my vines having made good wood, and the other pit coming in, as before, in succession. In the autumn of 1835, I had another still larger crop of finer fruit; and, if my employer had not been so very much alarmed at the expense of about £12 [upwards of fifty dollars] for coals, I should have had another crop fit to cut this last February, which would have been four crops in one year and eleven months; and the vines as strong again as they were when I first had the care of them, and producing double the quantity of fruit."

MISCELLANEOUS INTELLIGENCE.

ART. I. *General Notices.*

Chinese Method of Dwarfing Trees.—The Chinese are remarkable for their taste in wishing to have even the most stupendous objects in nature in miniature: mountains, rocks, lakes, rivers, aged trees, must all be represented and modelled upon a scale of a few inches. The former are formed of natural fragments, curiously and fantastically cemented together, leaving water-tight hollows and little channels, to represent lakes and rivers. The dwarfed trees are, however, very curiously trained, requiring considerable skill, and a considerable period of time, to get the trees into the desired form.

The trees which they commonly choose to train as dwarfs are, their native juniper (*J. chinensis*), the dwarf elm (*Ulmus pumila*), and the Indian fig (*F. indica*). The means employed in dwarfing these plants are,—keeping them always in the same pot—allowing but little earth for them to grow in, the pot being half filled with rugged stones, which jut out of the surface; among these some of the roots are brought out,

twisted together, and the points again buried in the soil; no more water is given than but barely keeps the plants alive. The bark of the stem and branches is torn and mangled in all manner of ways; sometimes a branch is slipped from the stem, but not entirely off, so as to hang downward, and kept in that position by wire. By wires, also, the tortuous direction of the shoots are given; and being repeatedly stopped, and the half of every leaf cut off, tends materially to check all vegetative inherent vigor, and in time produces a *vegetable cripple*. When the native vigor is thus subdued, the plant becomes subject to moss, lichens, and every weather-stain so desirable on such an object, to give the idea of hoar antiquity to a plant only of ten or a dozen years' growth. Such dwarfed trees are considered valuable; and some of the merchants imagine that they cannot make a more acceptable present to a European friend, than one of those dwarfed trees!—(*Paxton's Hort. Reg.*)

Chinese Love of Flowers.—So much is the love of flowers predominant in China, that almost every window-sill and every bit of a court in front or yard behind the houses of the shopkeepers and tradesmen are filled with plants, either in the ground, or in pots of different shapes, sizes, and colors. Some of the finest specimens of the Chinese magnolias we met with in the back courts of some of the merchants' houses; and in such confined places there are what they call complete pleasure gardens to be seen. We will describe only one of these, to serve as a sample of their taste.

In a back court belonging to *Sinchong*, the great china-ware manufacturer, we saw one of these gardens on a very small scale indeed. It occupied one corner of a paved yard, and consisted of a little irregular pool of water, in a nook of which grew a *Leinfæa* (*Nelumbium speciosum*), and in another a fine plant of the *Tow-cow* (*Alpinia nutans*). The pool was surrounded by rugged stones, and an arch of the same was carried over, to represent the mouth of a rocky cave. Between, and in the cavities of the stones, plants of the black bamboo were stuck here and there, to hang over the water, and roots of asparagus, which, with their slender and regularly branched stems of different heights, represented groves of trees. Around, and on the shelves of the stones, dwarfed trees, in pots covered with fragments of rock, were placed, and partly covered with moss and lichen and pieces of algæ brought from the sea-shore, altogether forming a spectacle of the most grotesque character. Such things we saw in many other places; and we verily believe that if a Chinese had a field of ten acres to beautify in his own style, it would be covered with the same kind of little fanciful freaks, repeated a thousand times over.—(*ib.*)

ART. II. Foreign Notices.

ENGLAND.

Horticultural Outrage in the Royal Botanic Garden of Edinburgh.—A letter has lately been received by a gentleman in New York, from Mr McNab, the curator, by which we learn that a large number of plants were destroyed in this garden. The following is an extract from the same, dated June, 1835:—"By some wicked and ill-disposed person, at present unknown, we had our new heath-house broken into a few nights

ago, when several of our large and splendid heaths, in full flower, were broke to pieces. Eleven large plants of the *Erica australis*, growing out of doors, and also covered with flowers, were smashed to pieces. During the same night, and, in all probability, by the same individual, the Experimental garden suffered much: most of their peach trees have been cut off the wall, besides other trees and flowering shrubs. Their green-house was also broke into, and much damage done. I am sorry to add, that as yet we have no clue to the detection of the wicked monster, although diligent research is making.”—*Conds.*

Ipomœa rubro cœrulea.—We had but just finished the paragraph in our last, and sent it to press, in which we mentioned this plant as figured in *Paxton's Magazine of Botany*, and stated that it would probably succeed in the open air, treated in the same manner as the *Cobœa*, when, in looking over a late number of *Loudon's Magazine*, the following met our eye:—“Many persons are deterred from cultivating this beautiful plant, from the idea that it requires a stove to bring it to perfection. This, however, is not the case, as nothing could be more splendid than the blossoms on a plant which I had last summer, in a pot in the open air. Three or four large magnificent blossoms, of a most brilliant ultramarine blue, expanded every morning for three weeks, dying off a pale pink; and in the end the plant produced several pods of ripe seeds. It was raised in heat, and trained up a slight frame, but received no farther culture, except occasional watering.”—We certainly hope that it will soon be introduced.—*Id.*

ART. III. Domestic Notices.

Rediscovery of the Scolopéndrium officinàrum.—We have the pleasure to announce to you the rediscovery of this fine fern, first described as being found in North America by Pursh, who gave as his locality Onondago, N. Y. Never having been seen since by any later botanist in any part of the Union, it was doubted by some whether that distinguished collector had himself found it: though from his accuracy and the peculiar distinctness of *S. officinàrum*, such a doubt was scarcely justifiable. The matter is now, however, quite set at rest by Professor Torrey, who has had the good fortune, a short time since, to find it in considerable abundance at Chittengo Falls, N. Y., probably in the neighborhood, if not in the same locality, where it was found by Pursh himself. Professor Torrey found it growing in small tufts on the precipitous sides of lime-rocks, in secluded situations, and, through his kindness, we have been favored with a number of the living plants, which we shall be happy to produce for the satisfaction of any naturalist who may be desirous of convincing himself of its genuineness as a native of North America. Having been only found at one locality on the continent, it may still be considered with the beautiful *Lygodium palmatum*, and the delicate *Schizœa pusilla* of Quaker's Bridge, N. J., as one of the rarest of our indigenous plants.—*A. J. Downing, Botanic Garden and Nurseries, Newburgh, N. Y.*

Poinsettia pulcherrima, Dr. Graham's new name for our splendid euphorbia, which he has lately published in the *Edinburgh Philosophical Journal*, is a just and well merited compliment to our esteemed minister to Mexico, Mr. Poinsett, through whose exertions it was first placed in the hands of our cultivators. In strict justice, however, we

suspect that Rafinesque's name, *Pleuradèna coccinea*, is entitled to the precedence, it having been published more than a year past. For the description, see his *Atlantic Journal*, p. 182.—*A. J. D.*

Campánula pyramidàlis hardy.—This beautiful plant is now in full bloom in our flower border, where it has been standing ever since it was sown from seed, two years since. It has attained the height of about two feet, and has four spikes of flowers, on each of which are expanded eight or ten blossoms. We believe this species of *Campánula* has always been considered tender, requiring the shelter of a green-house or frame through the winter; and generally grown in pots. We have no doubt but the plants will grow equally as well in the open air, and stand our winters, as the common blue-bell. Cultivated in pots, they make an elegant show, and, when grown to the height of *six feet*, as we have seen them, they are conspicuous plants to decorate green-houses in the summer season, as mentioned by us in our last. We hope to see them in every garden.—*Conds.*

Vanack Cabbage.—This fine cabbage, which is but little known in this country, is deserving of extensive cultivation. It is not only extremely early, but is a fine looking cabbage, and possesses the excellent qualities of tenderness and fine flavor. Seeds of this variety, sown on the 3d of June, came to full maturity early in August. We presented a fine head before the Massachusetts Horticultural Society last season, which was produced in our garden, in the hope that many of our market gardeners would be induced, from some notice they might take of it, to try it for an early crop, in preference to the Early York or Early Dutch; but from some cause it was only noticed as presented at a meeting of the Society, without scarcely any remarks in regard to its qualities. We hope another season that it will be more extensively cultivated: it is considered as one of the best in England, and from what we know and have seen of it, we can highly recommend it for its excellency.—*Ib.*

Bolmer's Washington Plum.—The finest specimens of this very superior plum that we have ever seen, have been lately presented at one of the Massachusetts Horticultural Society's weekly exhibitions. They were grown in the city, and were from the garden of E. Crafts, Esq. We can only attribute the cause of their extraordinary beauty to their being cultivated in the city; the side next the sun was of a fine blush color, resembling more the rich tints of a peach than a plum. Mr. Crafts has annually, we believe, sent specimens of this plum to the Society for exhibition.—*Ib.*

Variation in time of the flowering of the Cereus grandiflorus.—We were some time since informed by Mr. Haggerston, gardener to J. P. Cushing, Esq., Belmont Place, that a flower of this splendid plant opened in the collection there about six o'clock in the morning. When he entered the green-house, the blossom had just expanded, in which state it remained for an hour or more in full beauty: it then began to fade, and was soon closed forever. We do not recollect of ever reading of such a deviation from the usual time of flowering of this plant; and from what cause it arose, we cannot conjecture. It is a singular anomaly in vegetation, and worthy of record.—*Ib.*

The Young Hyson Tea Plant.—We have received, through the kindness of the Rev. Mr. Storrs, of Walpole, a few seeds of the tea plant, of which so much has lately been said in the newspapers, and noticed by us at p. 274. It is not the tea shrub of the Chinese, which produces very large seeds, but probably some indigenous herbaceous plant, as far removed from the *Thèa* family as the common sage of our gardens. The appearance of the seeds is very much like the *prickly spinach*. We shall sow them in respect to the kindness of the donor, but for no other purpose than to show the ignorance of the person who could publish to

the world the success he had experienced in propagating the tea shrub, when, in fact, it was no other than some wild plant, which the least botanical knowledge would have convinced him to the contrary.—*Ib.*

New York Horticultural Society.—This Society, which has lately elected Dr. Torrey for their president, was to have held a grand exhibition of flowers and fruits on Wednesday, Thursday, and Friday, the 28th, 29th and 30th of September. They have now, for both their public and private exhibitions, the splendid rooms, just finished, in the building of the Lyceum of Natural History, in Broadway. We hope that some of the committee of arrangements, or the secretary of the Society, will forward us an account of the fine things exhibited.—*Ib.*

Acclimation of the Chinese Mulberry.—M. E. de Wael, an amateur horticulturist, of Antwerp, who is now on a tour through this country for botanical purposes, has communicated to the Massachusetts Horticultural Society the method of managing the plants in Belgium, and suggests that if a similar treatment was pursued here, it might possibly result in their acclimation. The following is the paper alluded to:—

"Since I have been in this country I have heard of several complaints, chiefly from the Hartford mulberry tree planters, of the difficulty experienced the last two years in making the *Morus multicaulis* stand your winters well.

"This kind of mulberry is easily acclimated, if a proper mode of culture be adopted in the places where it is planted.

"In Belgium, the winters, notwithstanding they are not so severe as yours, often give us great trouble, and the influence of the cold was repeatedly experienced on these mulberries, which were often killed down to the roots.

"The late J. Le Candele, of Humbeck, near Brussels, suggested the idea of having different modes of experiment adopted in distant places. And the one which proved most efficient, was to cut down yearly the *Morus multicaulis*, in the same manner as is done with willows in a *Salicetum*, that is to say, at a few inches above the soil, and to cover the remaining trunk with dead leaves; in three or four years, the roots being stout enough, they did not require any more covering. From the buds preserved on the plants, fine and hardy shoots came forth, giving larger and more lively leaves to feed the silk-worms upon.

"It has been since stated to me, in a letter from Batavia (island of Java), that this mode of culture is much in use near Manilla and in China, not on account of the cold, but in order to keep the *Morus* in a shrubby state, which affords greater facility for gathering the leaves in the season when desired. There the mulberry seems to be planted in fields as Indian corn is here; in the fall of the year the plants are deprived of their branches, the number of which is continually increasing, and growing in one season from five to eight feet, which growth is fully equalled by our own. I would advise a similar experiment in this state: it might, perhaps, answer well."

We hope this method will be fully tried.—*Ib.*

The Scarlet Runner Bean.—Dr. Lindley has stated that the plants have tuberous roots, which may be taken up on the approach of frost, and protected in a dry cellar through the winter. Have you any knowledge whether this experiment has ever been tried by our amateurs or practical gardeners? It seems to me, that if the roots can be preserved, that a great crop of beans might be obtained the second season, as the vines would come forward much earlier. I have not any planted this season, but I offer these few suggestions in the hope that some of your numerous readers may try the experiment.—*An Amateur*, Aug. 31, 1836.

Dahlia Roots.—Can any of your readers inform me of the best mode of

preserving dahlia roots through the winter? If I recollect right, one of your correspondents in your first volume promised some remarks in regard to the taking up and preserving the roots. These have never yet met my eye. He will confer an especial favor by giving me a few hints in regard to the proper manner in which it should be done.—*Yours, S., Sept. 3, 1836.*

Cultivation of the Fig Tree.—We have often wondered why this very delicious fruit was not more generally cultivated in this country, particularly at the south. The trees can as easily be grown as the grape vine; and we believe that information is only wanted to induce persons to grow them. It is, therefore, with pleasure, that we present the following notice to our readers. Eliphalet Averell, Esq., of Hartford, has succeeded in their cultivation, and the method he has pursued is as follows:—"Mr. Averill lays down the branches in June, which form roots and grow luxuriantly. Immediately after the leaves fall off in autumn, and before hard frosts destroy their vitality, he lays them down and covers with earth to the depth of at least a foot. In order that a part of the roots may retain their original position in the earth, and be ready to furnish nourishment early the ensuing spring, he loosens the roots on one side of the tree, and leaves those on the other undisturbed—taking care that those loosened are not mutilated or otherwise injured. He then bends the branches over those roots that are left in the ground, fastens them with pegs, and covers both roots and branches with mellow earth to the depth above stated. In this condition he leaves them till the middle of May, or the first of June, according to the forwardness or backwardness of the season, and then uncovers them—sets them upright, and supports them with props, to keep them in a right position. By repeating this process every winter, he has succeeded in preserving his trees till they have attained a good size, and produce fruit in perfection and abundance."—(*Silk Culturist.*)

ART. IV. *Massachusetts Horticultural Society.*

Saturday, August 20th.—Exhibited. Fruits: from R. Manning, Rousselet hâtif, of Coxe, Fine Gold of Summer, Green Chisel, Robine, or August muscat pears, and a kind the name unknown; the Rousselet hâtif is an excellent early fruit, with a rich musky flavor. From E. Bartlett, Italian damask plums, a very good early fruit, of fine appearance. From S. Downer, Fine Gold of Summer, Bloodgood pears, and another variety, the name unknown; the Bloodgood pear is a fruit of medium size, rather handsome appearance, and of good flavor; Sopsavine or Shropshirevine, and Juneating apples, the latter an excellent early fruit; also a small variety of plum, the name unknown. From James Wentworth, Cambridgeport, apricots. From T. Mason, Black Ham-burgh and Sweet Water grapes.

August 27th.—Exhibited. From the garden of J. P. Cushing, Esq., by his gardener Mr. Haggerston, Crinum amabile, Hibiscus Rosa sinensis, var. rubra and carnea, Nerium Oleander and O. var. splendens, Combretum purpureum, Passiflora alata, Allamanda cathartica, Cérbera theveta, Ipomœa gossypifolia, Gésnera corymbosa, Eschscholtzia

crœcea, *Zinnia elegans* var. *coccinea*; also a variety of dahlias, among which were, Granta, Queen of the dahlias, Jason, Emperor of the Yellows, Countess of Liverpool, &c.; flowers of a beautiful double althæa, from China, were also exhibited, some notice of which will be found in another page. From S. Sweetser, a variety of dahlias, viz:—Laura, Loveley's Earl Grey, Jason, Cassina, King of the Yellows, Granta, Rose d'Amour, Queen of the dahlias, &c.; also fine double China asters, and elegant specimens of the Lamarque rose. From S. R. Johnson, Charlestown, dahlias, viz:—Cedo Nulli, Angelina, Picta formosissima and Granta. From S. Walker, *Euphòbia corollata*, *Láthyrus grandiflorus*, violas, phloxes, larkspurs, and several kinds of dahlias.

From Hovey & Co., dahlias, viz:—Hermione, Wells's Zarah, Widnall's Venus, Jupiter, Coronet, Beauty of Sheffield, Camelliaflora alba, Widnall's King of dahlias, Queen Bess, Cedo Nulli, Widnall's Rising Sun, Douglas's Criterion, &c. From M. P. Wilder, dahlias;—Viscountess Beresford, Chandler's Magnificent, Cross's Yellow, Inwood's Ariel, Cedo Nulli, Jupiter, Lady Fordwich, Metropolitan Calypso, Widnall's Rising Sun, Brown's Ophelia, &c.: also, *Nerium Oleander* var. *alba plena*, spectabile, simplici et aurantiaca. From T. Mason, *Hoya carnosa*, *Verbena chamaedrifolia*, *Gladiolus blandus*, *Ixia viridiflora*, *Lantana camara*, *Plumbago capensis*, *Bignonia radicans*, roses, and several kinds of dahlias.

Fruits: from E. M. Richards, Red Juneating, Shropshirevine, Early Bow, Early Harvest, and Curtis's Early Striped apples; also a variety without a name. From R. Manning, Skinless, Summer Melting, and Bellissime d'Ete pears; also, Calville rouge d'Ete, Red Astrachan, and Summer Rose apples, the latter excellent, and Italian Damask plums. From E. Vose, Red Juneating, Shropshirevine or Sops of Wine, and Early Harvest apples. From S. Pond, Apricot, Duane's Purple, Catalonian, Corse's Nota Bene, and seedling (?) plums. From James Eustis, South Reading, Simond Sweeting apples. From J. P. Cushing, Esq., a fine Persian melon, of the green fleshed class, a first-rate fruit.

Sept. 3d.—Exhibited. From S. Walker, several varieties of dahlias, viz:—Brown's Desdemona, Lady Milton, Neptune, Ophelia, Douglas's Augusta, &c.; also, *Valeriana rubra* *Salvia fulgens*, *Dracoccephalum virginianum*, phloxes, althæas, &c. Mr. Walker presented two seedling dahlias, raised by Mr. John Richardson, of Dorchester, which were very handsome flowers; the parent, we believe, was Widnall's Perfection. From S. R. Johnson, dahlias, viz:—Angelina, Guido, Mrs. Wilkinson, Lady Fordwich, Cedo Nulli, and Ophelia. From S. Sweetser, a variety of dahlias, as follows:—Widnall's Village Maid, Lady Granville, Priestley's Enchantress, Beauty of Salem, King of the Whites, Laura, Beauty of Sheffield, &c.; also double asters.

From Hovey & Co., forty varieties of dahlias, viz:—King of the dahlias, Widnall's Venus, Wells's Zarah, Metropolitan Perfection, Urania, Lady Fordwich, Metropolitan Calypso, Mrs. Gen. Grosvenor, Beauty of Sheffield, Widnall's Emperor, Apollo, and Black Prince, King of the Whites, Albion, Douglas's Criterion, Rising Sun, Coronet, &c. &c.; also, *Campánula carpatica*, *Zinnia elegans* var. *coccinea*, *Phlox cordata*, *decussata alba*, and *americana*, and the Yellow Sweet Sultan. From T. Mason, *Lychnis chalcédónica flore pleno*, *Láthyrus grandiflorus*, *Stèvia serrata*, *Bignonia radicans*, *Célsia crética*, *statices*, phloxes, &c., and dahlias of several sorts.

Fruits: From Messrs. C. & A. J. Downing, Newburgh, N. Y., by Mr. Manning, fine specimens of several kinds of plums were presented, viz:—Red Gage, Purple Gage, Scarlet Gage, Flushing Gage, Cruger's Seedling, Violet Pedrigo, Kirke's, and a seedling from the Bolmar Washington, a fine variety; the fruit committee of the society named

this Downing's Seedling; the Purple Gage seems to be identical with the Reine Claude Violet of the *Pom. Mag.*, and the Flushing Gage the same as the Imperial. From E. Vose, Red Juncating, Shropshirevine, and Lady Haley's Nonsuch apples; Green Gage, Imperial or White Gage, and Corse's Nota Bene plums. From S. Downer, Williams's Favorite, and River apples, also the Yellow or Amber Siberian, large Siberian, and small Siberian crab apples; an unknown variety of pear. From Judge Jackson, Brookline, Black Hamburgh Grapes. From E. Cruft, Boston, Bolmar Washington plums. From J. Balch, Black Prince, French purple, and Blanquette grapes, all fine specimens. From R. Manning, Drap d'Or, Orleans, and Precoce de Tours plums, and Bloodgood pears. From S. Pond, White Gage, Duane's Purple, and Corse's Nota Bene plums; also Skinless pears. From E. M. Richards, Catherine pears. From J. Leonard, Taunton, English Red Cheek apples. From C. Cowing, Williams's Favorite apples. From S. Phipps, a variety of plum, the name unknown. From Capt. W. Clapp, Dorchester, Clapp pears.

The quarterly meeting of the Society was held to-day. A committee of arrangements was chosen to prepare for an exhibition by the Society.

Read. A letter from E. T. Andrews, Esq. of Dorchester, accompanied with the present of a volume to the library.

Sept. 10th.—Exhibited. From S. Walker, *Lobelia cardinalis*, *Sálvia fulgens*, phloxes, China asters, larkspurs, marygolds, and dahlias, viz:—Beauty of Cambridge, Lady Fordwich, atropurpurea, Lord Liverpool, Miss Pelham, &c.; also, two specimens of Mr. Richardson's seedlings. From the Botanic Garden, by Mr. Carter, *Gentiàna saponària*, *Dracocéphalum virginianum*, *Rosa bracteata*, and a variety of dahlias, viz:—Queen of dahlias, *Anemoneflora striata*, King of the Whites, Widnall's Phyllis, Douglas's Augusta, &c. From S. R. Johnson, dahlias of several kinds, among which were, Lady Fordwich, Cedo Nulli, Mrs. Wilkinson, Guido, Angelina, Harris's Fulminans, and Duchess of Bedford.

From S. Sweetser, a variety of dahlias, including Lady Campbell, Laura, Maid of the Mill, Granta, Priestley's Enchantress, Othello, Enchanter, Perfection, &c. From Hovey & Co., a large number of dahlias, viz:—Hermione, Widnall's Venus, Black Prince, Emperor, Coronet and King of dahlias, Metropolitan Calypso, Widnall's Clio and Paris, Village Maid, Douglas's Criterion, Rising Sun, Sulphurea excelsa, Queen of the Yellows, Negro Boy, Queen Bess, &c.; also, scarlet zinnias, double asters, *Màdia elegans*, and several kinds of phloxes.

Fruits:—From S. E. Coues, Portsmouth, presented by Hovey & Co., seedling apples; a very excellent variety, and deserving of a name. From R. Manning, Dearborn's Seedling pear, and a kind the name unknown; also, Brevoort's Purple Washington, Bolmar's Washington, Grosse Reinè Claude, Byfield and Prince's Imperial Gage plums: the Byfield is a very productive variety, and a pretty looking fruit. From S. Pond, Magnum Bonum, Green Gage, Smith's Orleans, Duane's Purple, Prince's Imperial Gage and Seedling (?) plums. From E. Vose, Bolmar's Washington plums; also, Lady Haley's Nonsuch apple. From E. M. Richards, Early Sweeting, Gilliflower, Curtis's Early Striped, Lady Haley's Nonsuch, Porter, Benoni, Wait's Early, Red and Green Sweeting, Shropshirevine, Red Juneating, Early Harvest, Early Bough, and the Summer Pearmain apples, and two sorts without names: the Summer Pearmain is a fine fruit; also, pears, the names unknown. From E. Crufts, Bolmar's Washington plum. From S. R. Johnson, White Gage, Prince's Imperial Gage, and Bolmar's Washington plum.

September 17th.—Exhibited. From S. Sweetser, *Gloxinia maculata*,

Cobæa scândens, and dahlias, viz:—Maid of the Mill, Beauty of Sheffield, Yellow Turban, Widnall's Hebe (?), Othello, Granta, Village Maid, Springfield Rival and Enchanter, Jaune Insurmountable, Beauty of Salem, Priestley's Enchantress, &c; also, fine double asters. From S. R. Johnson, several dahlias, including Cedo Nulli, Guido, Angelina, Lady Fordwich, Harris's Fulminans, Mrs. Wilkinson, and Granta. From T. Mason, *Plumbago capensis*, *Celsia crética*, *Dracocéphalum virginianum*, *Agapánthus umbellatus*, salvias, double asters, and a number of dahlias.

From T. Lee, *Calámpelis scàbra*, *Maurándya Barclayàna*, *Ænothèra bifrons*, *Málope trifida* var. *grandiflòra*, *Zinnia elegans* var. *coccinea*, *Sálvia involucrata*, and two varieties of dahlias, viz:—Alice Grey and Hanoverian Stripe. From the Botanic Garden, by Mr. W. Carter, *Hibiscus palústris*, *Passiflora alata*, *Ammòbium alatum*, *calceolarias*, phloxes, salvias, &c., and dahlias, viz:—Douglas's Augusta, Ophelia, Loveley's Earl Grey, Belladonna, Hanoverian Stripe, King of the Whites, *anemoneflora striata*, &c. From Hovey & Co., dahlias in great variety, of which a few were Widnall's Venus, Wells's Pindaris, Bride of Abydos, Metropolitan Perfection, Wells's Penelope, Zarah and Dictator, Hermione, Mrs. Wilkinson, Rising Sun, Mrs. Gen. Grosvenor, Widnall's Clio, Phyllis and Perfection, Metropolitan Perfection, and Calypso, Emperor, Black Prince, Urania, Beauty of Cambridge, &c.

Fruits:—From E. M. Richards, Grisse Bonne (*Coxe*), Harvard and Great Mogul pears; also, Benoni and Orange Sweeting apples. From R. Manning, Julienne, Summer Franc Real, Surpasse St. Germain, Valee Franche, and Summer Rose pears: the Franc Real and Surpasse St. Germain are very superior fruits, and stand first among the summer pears; also, fine specimens of the German Prune. From B. V. French, Garden Royal, Dutch Codlin, Porter, and a native sweet apple called the Gideon. From Dr. Ford, of Alna, Me., by Wm. Kenrick, Early Harvest, Hinkley Sweeting, Pomme de Roi, Lewis's Early, Roxbury, Doggett, and Haley apples. From Mr. Vandyne, Cambridgeport, Smith's Orleans and White Gage plums. From T. Mason, Brugnon Nectarines, very handsome. From Hovey & Co., peaches raised on plants in pots; also, Walker's Long Green cucumber, a new and superior kind: this specimen was *twenty inches* in length.

At this meeting of the Society Cav. Doct. Vincent Tinio, director of the horticultural garden at Palermo, was chosen a corresponding member.

The Annual Exhibition of the Society took place on Saturday, the 24th of September, at the Artists' Gallery in Summer-street. The display of fruits and flowers was very good, although the unpropitious season had led us to anticipate otherwise. Of dahlias, a more gorgeous and magnificent show was never made by the Society. The exhibition was only intended for one day, and not so great exertions were made by the members as at the show last year; still the *quantity* was but little less, and the specimens in many instances superior. We had not the opportunity to note down all we wished, but the following account, as far as regards the floral part, enumerates all of much importance:—

From J. P. Cushing, Esq., Watertown, very fine specimens of *Combrètum purpureum*, *Crinum amabile*, *Nèrium odorata* var. *spléndens*, *Amaryllys Belladónna*, *Phasèolus Caracalla*, *Passiflora alata*, and a large number of dahlias and other flowers, which were wreathed around a grape vine in a pot, in a bearing state. From Mr. Wm. E. Carter, of the Botanic Garden, several beautiful bouquets of flowers, and a great number of fine dahlias, among which we noticed of good specimens, Beauty of Salem, Satropa, Springfield Rival, Countess of Liverpool,

Brown's Ophelia, Queen of the dahlias, Loveley's Earl Grey and Miss Pelham. From M. P. Wilder, Esq., *Hedychium Gardnerianum* and *Gloxinia maculata* in pots; also, specimens of *Nerine sarniensis*, *Amaryllis Belladonna*, *Ornithogalum aureum*; a fine plant of the Angelina dahlia in a pot, with sixteen or seventeen blossoms expanded; also, many other varieties, of which we noticed as follows:—Brown's Ophelia, Wells's Paragon, Inwood's Ariel, Douglas's Glory, Bride of Abydos, Wells's Zarah, Urania, Mrs. Wilkinson, King of dahlias, Douglas's Criterion, Hermione, Jupiter, Rising Sun, *Aurantia speciosissima*, and the Queen of dahlias; new scarlet zinnias, *Campánula pyramidalis*, and a number of pretty seedling pansies.

From S. Sweetser, fine double asters, bouquets of flowers, and a large variety of dahlias; among them we noticed of good specimens, King of dahlias, Beauty of Surrey, Priestley's Enchantress, Village Maid, Granta, *Aurantia speciosissima*, Duke of Devonshire, Widnall's Emperor, King of Yellows, Negro Boy, Springfield Rival, Loveley's Earl Grey, Countess of Liverpool, Jason, Beauty of Salem, Widnall's Enchanter, &c. From S. R. Johnson, fine dahlias, among which were Cedo Nulli, Brown's Ophelia, Mrs. Wilkinson, Wilmot's Superb, Lady Fordwich, Duchess of Bedford, Harris's Fulminans, Garnier's Princess Victoria, Guido, Agrippina and Emperor of the Yellows. From T. Mason, several large and elegant bouquets and dahlias, viz:—Granta, Village Maid, King of the Whites, Jason, Picta, Denmissi, 'Transcendant, &c.

From Hovey & Co., bouquets of flowers, a large number of superb double asters, and a great variety of dahlias; those most beautiful and rare were Hermione, Wells's Zarah, Widnall's Venns, Urania, Brewer's Rival King, Metropolitan Perfection and Calypso, Coronet, Beauty of Sheffield, Mrs. Wilkinson, Bride of Abydos, Wells's Penelope, and Pindaris, Beauty of Camberwell, Beauty of Cambridge, Village Maid, Widnall's Paris and Queen of dahlias, Lady Fordwich, Douglas's Criterion, Rising Sun, Duchess of Buccleugh, Widnall's Emperor and Black Prince, Countess of Cork, Widnall's Clio, *Camelliaflora alba*, &c., &c. From S. Walker, several fine pansies, *Tigridia pavonia*, *Delphinium sinensis*, *Argemone mexicana*, *Funkia subcordata*, *Salvia fulgens*, new scarlet zinnias, pinks, &c.; several bouquets and a number of fine dahlias, among which were Lady Milton, Brown's Ophelia, Beauty of Cambridge, Lord Liverpool, Queen of dahlias, Granta, Agrippina, Beauty of Salem, Springfield Rival, &c.

From Wm. Wales, Dorchester, a beautiful bouquet of flowers. From J. L. L. F. Warren, Brighton, dahlias and bouquets. From S. Phipps, Dorchester, bouquets of flowers. Flowers were also contributed by other members of the Society.

The pot of grapes from the garden of J. P. Cushing, Esq., at Belmont Place, was very beautifully decorated by his gardener, Mr. Hagerston.

Fruits:—Of the fruits, the pears were exceedingly fine, and the number of new sorts (upwards of *seventy*), contributed by that indefatigable amateur of this fruit, Mr. Manning, was immense. Some fine specimens of the White Nice grape were sent by Mr. Tidd, of Roxbury.

From R. Manning, pears, as follows:—Autumn Superb, Belle et Bonne, Belle Lucrative, Saunders' Beurré, Coffin's Virgalien, Beurré Diel, Colmar Souverain, Colmar Sabine, Passe Colmar, Capsheaf, Gansel's Bergamott, Easter Beurré, Beurré Rose, Bezi Vaet, Bezi de Chaumontelle, Iron or Black, Williams's Bon Chrétien, Bleeker's Meadow, Buffum, Wilkinson, Washington, Bowdoin, Capiaumont, Cattillac, Cushing, Doyenne Gris, Doyenne Blanc or St. Michael, Glout Morceau, Beurré Von Marum, 'Échasserie, Sucre Vert, Henry IV.,

Sylvanhe Vert, Thompsons, Green Pear of Yair, Jalousie, Louis Bonne, Naumkeag, Newtown, Virgalieu, Remsens, Marie Louise, Verte Longue, Napoleon, Pope's Quaker, Orange d'hiver, Raymond, Rousselet de Rheims, Summer Thorn, Fulton, Beurré de Bollwiller, Malinoise, La Bonne, Princess d'Orange, Styrian, St. Ghislain, and many sorts unnamed; also, Fall Harvey, King of the Pippins, and Rambour Gris or Franc apples. From J. P. Cushing, Esq., by Mr. Haggerston, fine Williams's Bon Chrétien pears; Black Hamburg, Muscat of Lunel, Muscat of Alexandria, White Frontignac, and Black St. Peter's grapes.

From Col. Perkins, by Mr. Cowan, fine grapes, nectarines and peaches, viz:—Murray's and Broomfield nectarines; Noblesse, and New Royal George peaches; Black Hamburg, Black Frontignac, Grizzly Frontignac, Black St. Peters, Frankindael, White Hamburg, White Chasselas and Muscat of Alexandria grapes. From E. Vose, Esq., Williams's Bon Chrétien, Roi de Wirtemberg, Lewis, Andrews, Urbaniste, Vert Longue, and Napoleon pears; Grosse Mignonne peaches, exceedingly fine. From Wm. Oliver, Swan's Egg, Brocas Bergamot, Seckel, St. Ghislain, and Harvard pears.

From E. Bartlett, fine specimens of pears, viz:—Napoleon, Marie Louise, Capiamont (?) Sylvanhe Vert, Culotte de Suisse, Andrews, Seckel, Johannot, and Cushing pears; Porter, Hawthornden, and other apples. From Gen. Josiah Newhall, Lynnfield, Porter apples; also, Capiamont (?), and Burgomeester pears. From B. V. French, Gravenstein, Ruggles, Monstrous Bellflower, Dutch Codlin, and other apples. From Wm. Kenrick, Beurré de Bollwiller pears. From J. A. Kenrick, Harvard, Seckel, and Andrews pears: Hempstock and Hubbardston Nonsuch apples.

From J. Tidd, Roxbury, Grizzly Tokay, Black Harrisburgh, and White Nice grapes: one of the clusters of the latter weighed *six pounds three ounces*. From Mr. Hathorn, Salem, pears, unnamed. From S. Sweetser, Chelmsford (?), pears. From M. P. Wilder, Esq., Williams's Bon Chrétien pears; and Roxbury Russett apples, of the growth of 1835. From Gen. Newhall, Dorchester, Porter apples. From D. Murphy, Chelmsford (?), pears.

From J. Warren, Weston, Warren's Seedling apple, a small but good fruit, and abundant bearer; also, Porter and the American Non-pariel apples; the latter originated in Berlin, Mass., and is a desirable fruit. From Gardner Brewer, Capiamont (?) pears, and Prince's Imperial Gage plums. From Joshua Gardner, Dorchester, Seckel pears, and Gravenstein and Monstrous pippin, and other apples. From John Woodbury, Golden Chasselas grapes. From J. L. L. F. Warren, Porter apples; also, Sweet Water grapes from the open air, and a squash, the produce of the year 1835.

From T. Mason, Black Hamburg and Sweet Water grapes. From Mr. McLennan, gardener to Wm. Pratt, Esq., Persian Musk and Minorca melons. From S. R. Johnson, Black Hamburg, White Frontignac and Sweet Water grapes, the latter from the open air. From E. Breed, a Valparaiso squash of great size.

At twelve o'clock an address was delivered before the Society by E. Weston, Jr., Esq. It was well adapted to the occasion, consisting, as it did, of an account of the theory of Dr. Van Mons in producing new varieties of fruits from seed, and some interesting remarks in regard to his character; the importance of the creation of so many fine fruits upon the horticulture of our country, &c. We shall notice it at another time.

ART. V. Quincy Market.

		From	To			From	To
<i>Roots, Tubers, &c.</i>		\$ cts.	\$ cts.	<i>Squashes and Pumpkins.</i>		\$ cts.	\$ cts.
Potatoes :				Canada, per pound,.....		6	7
Common, { per barrel,....	1 50			Winter crook neck, per pound,		4	
{ per bushel,....	50	75		Pumpkins, each,.....		12½	20
Chenangoes, { per barrel,....	1 50	1 75		<i>Pot and Sweet Herbs.</i>			
{ per bushel,....	50	75		Parsley, per half peck,.....		25	
Sweet Potatoes, per bushel,...	1 50			Sage, per pound,.....		17	20
Turnips :				Marjoram, per bunch,.....		6	12
per bushel,.....	1 00			Savory, per bunch,.....		6	12
per bunch,.....	6			Spearmint, per bunch,.....		6	
Onions :				<i>Fruits.</i>			
per bushel,.....	1 50			Apples, dessert :			
red, { per bunch,	4	6		New { per barrel,.....	2 00		
white, { per bunch,	4	6		{ per bushel,.....	1 00	1 50	
Beets, per bunch,.....	6			Porters, per bushel,.....	1 50	2 00	
Carrots, per bushel,....	1 00			" per peck,.....	50	62½	
“ per bunch,.....	6			Pears :			
Salsify, per bunch,.....	12½			Seckel, per half peck,....	75	1 00	
Horseradish, per pound,....	8	12½		St. Michaels, per half peck,	75	1 00	
Radishes, per bunch,.....	4	6		Andrews, per half peck,...	50	75	
Shallots, per pound,.....	20			Capiaumont, per half peck,	50	75	
Garlic, per pound,.....	14			Peaches, per bushel,.....	3 00	4 00	
<i>Cabbages, Salads, &c.</i>				" per half peck,....	50	75	
Cabbages : per dozen,				" extra, per dozen,....	25	37½	
Early York,.....	50	75		Watermelons, each,.....	20	37½	
“ Sugar-loaf,.....	50	75		Muskmelons,.....	25	37½	
Savoy,.....	50	75		Pine Apples, each,.....	25	37½	
Drumhead,.....	50	1 00		Grapes: (hot-house,) pr pound,			
Red,.....	1 00	1 50		Black Hamburg,.....	75	1 00	
Cauliflowers, each,.....	12½	25		White Sweet-water,.....	50	75	
Lettuce, per head,.....	6	10		Barberries, per bushel,....	75	1 00	
Celery, per root,.....	12½	25		Cucumbers, per dozen,....	12½	17	
Tomatoes, per half peck,...	25			" for pickling, pr. hund.	37½	50	
Sweet corn, per dozen ears,...	12½	17		Oranges, { per dozen,.....	25	50	
Peppers, per pound,.....	6	8		{ per box,.....	5 00	6 00	
Beans :				Lemons, { per dozen,.....	37½		
Common, shelled, per quart,	12½	17		Shaddock, each,.....	25		
Sievas, “ per quart,	25	37½		Almonds, (sweet) per pound,...	12	14	
				Filberts, per pound,.....	4	6	
				Castana,.....	3	6	

REMARKS. The previous part of this month, as we feared, was very cool, and accompanied by a severe frost on the morning of the 6th, which killed all tender productions. Corn, beans, vines of all sorts, peppers, &c. have suffered much, and in many instances been wholly destroyed. The potato crop in this vicinity, from the combined effects of the late drought and early frost, will be small compared with what we have anticipated. They are already scarce for the season, and prices rather high; very few have yet arrived from the eastward, and we have learnt that the crop has suffered there as well as with us. Sweet potatoes are not so large this year as last, but come to hand in good order. Turnips are not so abundant as at the time of our last report. Carrots have not done well this season. Radishes are getting

out of season. Cabbages will be scarce the coming winter, as the crop is quite small; Drumheads have just come to hand; Red cabbages are very scarce, and command a good price. Cauliflowers do not appear to be very plentiful. Tomatoes have not ripened well this season, here, and those in the market now are mostly picked from vines which were partly, or wholly, destroyed by frost in the early part of this month. Corn has been very small this season. We did not expect to see many Sieva beans this fall, but the late warm weather has brought them forward rapidly. Of squashes the crop is very small: some Canadas, which have been brought in, have been immediately taken at quotations, though they were but partly ripened; common crooknecks have hardly attained to maturity.

Apples, though not yet abundant, will, we cannot but think, be tolerably plenty in a short time; in this quarter they are rather small, but, at the south, they are exceedingly large and fair. Pears are scarce; there has been but few Bartlett's in this season, no Cushing's that we have yet seen, and other sorts come to hand slowly; St. Michaels are much better than in ordinary seasons. Peaches, from New York, are quite plenty. The whole stock of watermelons has been received from the south, as has that of muskmelons. Grapes are more plentiful and prices more moderate. Pine apples are scarce; there have not been any arrivals of late. Immense quantities of cucumbers for pickling have been received here from New York. Oranges and lemons remain about the same.—*Yours, M. T., Boston, Sept. 22d, 1836.*

ART. VI. *Meteorological Notice.*

FOR AUGUST.

THE first part of the month of August was unusually cold: a light frost occurred about the 6th, which did some damage to vegetation in low situations. The latter part was extremely dry, not even a shower occurring to the end of the month.

THERMOMETER.—Mean temperature, 60° 30'—highest, 78°; lowest, 40° below zero.

WINDS.—N. two days—E. nine—S. five—S. W. eight—W. three N. W. four.

Force of the Wind.—Brisk, eighteen days—light, thirteen days.

Character of the Weather.—FINE, twenty-three days—FAIR, five days—CLOUDY, three days.

Showery, four days—*rainy*, one day.

MONTHLY CALENDAR
OF
HORTICULTURE AND FLORICULTURE,
FOR OCTOBER.

FRUIT DEPARTMENT.

Grape Vines in the green-house, or grapery, after the fruit is cut, should be trimmed of all laterals, particularly those near the base of the shoots. If in green-houses, the shoots should be tied up neatly, and all yellow leaves removed as fast as they fall from the vines. A few clusters may be kept on until November; and if the house is kept well aired, and free from dampness, they will remain in good perfection until that time.

Vines in the open air will need pruning, in order that the fruit may be better ripened.

Fruit Trees of all kinds may be transplanted towards the latter part of the month.

Strawberry beds must be kept clear of weeds by frequent hoeings; and where new ones have been made, they must be duly watered in dry weather.

FLOWER DEPARTMENT.

Chrysanthemums will now be showing their flower buds, which will come forward rapidly: remove them to the green-house or parlor, where they will be out of danger of the frost. Water them freely as their blossoms expand.

Camellias will now require to be removed to the green-house; they must not be there crowded together, but have sufficient room for their branches; top dress them with some suitable fresh soil, and wash the pots perfectly clean.

Geraniums that were struck from cuttings in July, and not yet potted, should have the same done immediately, that they may get better rooted.

Verbena chamædrifolia: if plants of this beautiful verbena are wanted for early spring flowering, a few of the lateral runners should be potted in a light and rather sandy compost. They will not flower well during the winter, in an ordinary green-house, but the plants may be preserved until spring. They require the heat of the stove to produce their blossoms.

Dahlias, after the frost has killed the tops, should have the soil drawn up over the roots, that later and more severe frosts may not injure them.

Annuals: continue to sow these in the border, as we have before recommended.

Tulips, *Hyacinths*, *Narcissuses*, &c. may be planted towards the latter part of the month.

Tigridia pavonia and *conchiflora*, and *Amaryllis formosissima* bulbs should be taken up before frost.

Mignonette plants, from seeds sown last month, should be potted off into small pots, and kept free from dampness.

Auriculas should be sheltered in a frame or pit: a green-house is too warm for them.

Carnations, layers of fine sorts, should be potted off into No. 2 pots, three plants in each.

THE
AMERICAN
GARDENER'S MAGAZINE.

NOVEMBER, 1836.

ORIGINAL COMMUNICATIONS.

ART. I. *Some Remarks on the Cultivation of Lima Beans.*
By the CONDUCTORS.

THE uncertainty with which a crop of this truly estimable vegetable is obtained in our climate, has led us, the past season, to try a new method in their cultivation.

It is well known that the Lima bean is a strong and very rapid grower, attaining, when the plants are properly supplied with tall stakes, the height of ten or fifteen feet, and, in some strong soils, even overtopping stakes of the latter height. The plants rarely show bloom until late in the season, when they have run some distance; and often before the pods are well filled, and sufficiently large for picking, our autumn frosts have entirely destroyed the vines. The cultivator is thus not only deprived of his supply for cooking, but is also prevented from preserving any ripe seed for another season. To guard against disappointment, it is necessary to have recourse to more than ordinary care and attention.

The Lima bean is very tender, much more so than any other variety, not excepting the Sieva or Carolina,—the latter often succeeding when the former will not flourish at all. At the time of sowing, which is usually in the month of May, the seed often rots in the ground; if it comes up well, and dull, cold, cloudy or very wet weather occurs, soon after, the plants turn yellow and gradually appear less vigorous, finally damping off close to the ground: it is rare that the cultivator can procure plants from the first sowing: we have known, in some instances, two or three to be made, and these without saving scarcely a plant. The past season was so unpropitious that such failures occurred with many cultivators.

The method which we have adopted to procure a crop, we have, therefore, thought might be of some interest to our readers; and though, we believe, not a new system, one which we have found to succeed so well, that, at the present time, we have an abundant supply, and the vines partially destroyed by the uncommonly early frosts.

About the 20th of May, after three successive failures in the open ground, we procured a number of sods, which were placed in a spent hot-bed: the sashes were kept covered close for a day, to give additional warmth, when the beans were planted all over the surface of the sods; a little common soil of the garden was then sifted over them, through a coarse sieve, and the sashes again closed. At night a few mats were thrown over the lights, to prevent the escape of what little heat there was in the bed. A little water was applied the second or third day after planting, which was repeated once or twice before the plants were up. As soon as they had made two rough leaves, preparations were made to transplant them into the rows where they were to grow throughout the summer. The soil was enriched with some well decayed manure, and the stakes placed in the rows, to prevent disturbing the plants after they were set out. The sods were taken out of the bed very carefully, and with a sharp spade separated in such a manner as to leave a portion of the turf or sod attached to the roots of the plants: in this manner they were set out in the rows, placing them in the soil so deep that the cotyledons, or seed leaves, were just above the level of the surface: after this they received no more than ordinary attention, and soon began to make a good growth: probably, if dry weather should ensue immediately after transplanting, the plants would need watering once or twice; but cold and unfavorable to vegetation as was the last spring, watering would not only be injurious, but might prove fatal to their future success.

Peas have repeatedly been forced, or brought forward in this manner, though we do not recollect of ever noticing any account in which the bean was attempted; but they bear transplanting as well as peas, and a good crop can with certainty be relied upon. It is unnecessary for us to say any thing farther to induce lovers of this vegetable to give the experiment a trial. To market gardeners it is important, as it will enable them to supply them in quantities; and the high price they bring will pay them well for their labor.

One thing will be observed, that our seeds were sown about the 20th of May, after repeated failures to vegetate others in the open ground; if, however, no attempt had been made to raise them only in the hot-bed, and the seeds had been planted a fortnight sooner, pods large enough for shelling could have been obtained by the first of September.

ART. II. *On the Cultivation of Double China Asters in Pots.*
By S. SWEETSER.

THE cultivation of double asters in pots is very similar to that of other annuals, such as balsams, globe amaranthuses, &c., with the exception that they require much less heat, and may consequently be produced in any garden, even without the aid of a green-house, while the former can only be grown with the assistance of a hot-bed.

Having had considerable success the past season in flowering quite a number in pots, I send you these few remarks, though they contain nothing new that I am aware of, but are simply the result of my method of growing the plants. They were the greatest ornaments of my green-house throughout the summer, and elicited the admiration of many friends, and the notice of yourselves; and as I have never observed any plants cultivated in this manner, perhaps my remarks may be the means of their more general growth in pots. The varieties are now very numerous, and possess exceeding beauty.

Seeds of five or six varieties were sown in a frame, without much heat, early in the month of April. The plants came up very thick in the pots, and were allowed to remain until they had made five or six rough leaves: they were then potted off into number two pots, in a light rich compost, one plant in each, and placed in the frame or green-house, where they made a slow but strong growth. In the month of May the plants were shifted into number three pots, and, in the course of a few days, they were removed to the open air, in a sunny situation, where they remained for some time. The plants were regularly supplied with water. They soon began to make a rapid growth, and, early in the month of June, they were again repotted into number five pots: the soil at this shifting was composed of loam and leaf mould, or decayed manure of any kind, in about equal proportions. The plants immediately after this shifting made vigorous growths; the leading shoots were tied to sticks as they advanced, to prevent their being broken by the wind.

The green-house plants being mostly removed out of doors, or such of them as did not require to be retained, all the pots containing the double asters were placed upon the stages, at the distance of about two feet from each other. The upper sashes were allowed to remain open all night throughout the summer, except when the weather was extremely cool; water was supplied in large quantities, and occasionally liquid manure. Towards the latter part of July the plants showed flower-buds, which soon began to expand: and, from the first of August to the present

time, there has been a constant display of beautiful flowers. On some of the plants there were upwards of thirty fine blossoms.

If the seeds of asters were sown late in May or even in June, and the plants treated in the same manner, I have no doubt but what their flowering might be prolonged until late in autumn, and they would then be desirable for the parlor, giving it a gay appearance, when, generally, at that season, few plants are to be seen in bloom.

Yours,

Cambridge, October 1, 1836.

S. SWEETSER.

ART. III. *Calendar of Plants and Shrubs in bloom from the month of May to October, inclusive.* By the CONDUCTORS.

THE dahlias will flower profusely this month, and the finest blooms of the season generally expand during the earlier part of it—later, the plants are exhausted from their exuberance of flowers, and they are apt to open less full of petals, and often show a yellow disk. The best time, therefore, for showing the finest blooms, is from the first to the middle of September.

Perpetual roses, of which we made mention in our last, will bloom more profusely as the weather becomes cooler. We have had many fine flowers expand during this month. The old china monthly roses will now flower profusely, if the roots are growing in a good rich soil.

The garden yet wears a gay character where there is a judicious selection of perennial and annual flowers. Double asters are truly superb, and flowering as they do, constantly, from August until November, must be considered as one of the most brilliant ornaments of the garden. Petunias, dahlias, &c. in pots, will be in full beauty at this time; *Verbena chamædrifolia*, plants of, in pots, will be now elegantly in bloom; patches of it planted in a warm aspect and in a rich light soil, will also now present a glittering display of flowers, too vivid to look upon. This little gem of the garden should not be planted where it will be overshadowed by the foliage of tall plants, nor be encroached upon by more humble ones: it should be allowed plenty of room, and the trailing stems should be pegged down into the soil every three or four inches.

September.—Few shrubs now remain in flower; the double

and single althæas are the only ones of much beauty: of herbaceous plants are *Hibiscus palustris* and *militaris*, the former exceedingly showy: *Cassia marylandica*, *Heliánthus altissimus*, multiflorus and multiflorus var. flore pleno; the three last very ornamental: *Rudbeckia laciniata* and purpurea, *Aster Novæ Anglæ* and siberica, *Kitaibelia vitifolia*, *Gaillardia aristata* and bicolor, and *Monarda didyma*: *Coreopsis Atkinsoniana*, tripteris, tenuifolia, lanceolata and verticillata: *Veronica exaltata*, *Dracocephalum altaïense* and virginianum, *Campánula carpatica* and pyramidalis; the latter species quite hardy and beautiful: *Delphinium sinensis*, exaltatum, elatum and elegans flore pleno; all these are very desirable plants, particularly so the first and last ones: *Gilia coronopifolia*, *Lychnis chalcædonica* flore pleno coccinea and fl. pl. alba, *Reseda odorata* var. frutescens, *Lobelia cardinalis*, fulgens, syphilitica, splendens and speciosa, and *Funkia subcordata*: *Potentilla Hopwoodiana*, *Mayiana*, *Russelliana* and *nepalensis*; all very desirable plants in a collection: *Tagetes lucida*, *Pentstemon ovatum*, roseum, pulchellum, and digitalis; all the pentstemons are among the finest plants of the garden: of phloxes, *P. cordata*, decussata alba, corymbosa, and latifolia, are in elegant bloom, with their first flowers, as they are late kinds: and *P. pyramidalis* alba, p. rubra, p. purpurea and p. pumila, *Shepherdia americana*, roseum, *Wheeleriana*, and some others, are now displaying very fine clusters of flowers for a second crop, the old flower-stems having been cut off as soon as they had faded; no tribe of hardy perennials is more ornamental throughout summer than this; there has not been a day, since the first flowers opened on that pretty vernal species, *P. stolonifera*, up to the moment we are now writing (October), but we have had in our garden from two to ten different kinds in bloom at once; some excellent hints in regard to the cultivation of this genus will be found at p. 361. The Chinese imperial pink (*Dianthus chinensis*), and the superb pink, still continues in flower: *Eschscholtzia californica* and crocea, *Statice latifolia*, *Gmelina* and scoparia, *Gentiana saponaria*, *Valeriana rubra*, *Lathyrus grandiflorus*, *Stevia purpurea*, and *Celsia cretica* also continue to bloom very beautifully; *Chelone barbata* and *Lyoni* are very elegant. *Gladiolus natalensis*, *Tradescantia virginica* and flore pleno rubro, *Commelina cœlestis*, *Agapanthus umbellatus*, tiger flowers, tuberoses and tiger lilies yet remain in fine bloom, or, if planted at different periods in the spring, some will now be in their greatest splendor. All the salvias, *Verbena chamædrifolia*, snap-dragons, &c., also yet display a good succession of flowers. *Bignonia radicans*, and the trumpet honeysuckle, are in flower. The snowberry is now very handsome, with every branchlet terminated with a cluster of snow-white berries, which, from their weight, give a pendant habit

to this little shrub: the other species, *S. glomerata*, is quite ornamental.

Hydrangeas yet remain in beauty, although not in so high a state, as in the previous month. Annuals are in general in the greatest perfection this month, and expand a profusion of flowers. It is hardly necessary to particularize any, as they are nearly all beautiful in a greater or less degree, and should be in every garden where there is sufficient room. We may here, however, be permitted to mention a few of the choicest, though we may have, incidentally, done so before.

All the varieties of double asters must be grown for a display of flowers in the months of September and October: the yellow, white, and purple sweet sultans, are very elegant: balsams are showy: poppies, if good sorts are selected, are extremely splendid when planted in patches or beds by themselves: the tall branching double, and the rocket larkspurs, have a fine appearance; white and purple petunias, nemophilas, clarkias, gillias, particularly that fine species tricolor, eternal flowers, zinnias, stocks, marygolds, hibiscuses, candy-tufts, madias, coreopsis, the dwarf convolvulus, verbenas, globe amaranthuses, calendrinias, schizanthuses, and, indeed, many more well known kinds, which it would be superfluous to enumerate, should be cultivated.

The herbaceous climbing plants in flower now are *Calámpelis scabra*, exceedingly beautiful, *Lophospérmum erubescens*, *Maurándya Barclayana*, *Cobæa scandens*, *Ipomæa Quamoclit*, both the red and white convolvuluses, &c. Of shrubby kinds, *Bignônia radicans*; in the early part of the month *Clématis virginiana*, and in the latter full as ornamental with its seeds.

October.—Quite a change now takes place in the aspect of the garden: if, however, the weather remains warm and pleasant, this change is less perceived until late in the month; but in seasons like the present there will not be much to admire. We do not anticipate such cold and backward years as the present one has been, and we shall therefore intend our remarks to apply to more favorable ones, as we in the first paper of this series hinted; there would then be many plants in full beauty. Dahlias still continue to flower well, and are the finest ornaments of the garden. Among the herbaceous plants, *Delphínium exaltatum* and *elatum* are in flower; *Potentilla Russelliana* and *nepalensis*, *Pentstemon ovatum*, *roseum* and *pulchellum*: *Státice Gmelina* and *latifolia*, valuable as flowering all summer: *Catanánche bicolor*, *Campánula pyramidalis* and *carpática*, *Lobelia speciosa* and *sphilítica*, *Dracocéphalum virginianum*, *Coreópsis lanceolata*, *Reséda odorata* var. *frutescens*, *Eschschóltzia californica* and *crocea*, *Phlóx cordata*, *americana*, *decussata alba*, *pyramidalis penduliflora*, *roseum*, and some others; *Oxalis Déppeii* and *Bowiei*: that elegant indigenous plant, *Gentiana crinita*, blooms

in perfection this month, opening its azure flowers after "the keen and frosty night," with renewed brilliancy. It should be transferred from its native habitats (where it may be often seen) to the flower-border of every garden. The red berries of the *cratægus* and the white ones of the snowberry now ornament the border: noisette and China roses continue to bloom in tolerable profusion.

The different *salvias* will be now in their splendor. *Verbena chamædrifolia* will also flower till severe frost destroys the plants. *Petùnias*, *Lobelia bicolor*, *calendrinias*, &c., will also show an abundance of flowers this month. Most of the annuals, as mentioned last month, continue in bloom.

We here conclude our remarks on this subject, and we hope the several papers have been as useful to our readers, or that portion of them who are in want of such information, as they have anticipated. We have not, as we believe that our readers are aware, intended them for the professed amateur in floriculture, but for the proprietor of the suburban, or village garden, where there is but a small quantity of ground, and where a continual rather than a purely rare display of flowers is wanted, from the commencement of the season, until late in the autumn. The number of plants may be augmented, in a great degree, and many very beautiful ones included; but the prices of such are yet without the reach of many who would desire them, and are therefore willing to wait until their cultivation shall become so general, that they may be easily obtained. A garden containing such a number and variety of plants as we have enumerated, will be by no means a very ordinary one, and the owner of such should annually plant any new seeds of perennials, in order to enrich it as much as possible, and also add two or three new plants every season. If there is considerable room, duplicates may be at first planted, which can afterwards be destroyed; when the space is very limited, the whole stock, of some of the least beautiful, may be rooted out, to make place for more choice ones. By pursuing some such system, the garden will be a source of increasing interest, and eventually contain an excellent collection of plants.

We shall improve the first opportunity, if not in the present volume, in the succeeding one, to give a list of the most desirable plants for a small green-house; and if not prevented for want of time, a few hints on the cultivation of each species and variety.

ART. IV. *On the Preservation of Plants, Fruits, &c. against Ants.* By M. EMILIEN DE WAEL, of Antwerp.

So many modes are in use throughout Belgium, that it is hardly possible to say which is the best, every one preaching highly upon his own method. I will, therefore, only state the three ways most generally adopted.

1st. The use of fish oil does not destroy the insects; but it is an excellent preservative for both trees and vegetables, against their aggress. If it is a tree that wants to be protected, it is done by putting round the stem a piece of canvass impregnated with oil. If it is a bed planted with seeds that wants protection, the surface may be lightly sprinkled over with the oil, or at sundry places may be put some rags, soaked through with the same. The smell annoys the ants so much, as to prevent their coming near.

2d. A compost, of four parts tar, one part essence of turpentine, and one quarter sperm or whale oil, is also very much used.

3d. Repeated watering with one ounce sulphate of potash, dissolved in water, is an excellent preservative, but the destruction of the ants is not the consequence, and it does not expel them longer than the watering is continued.

The only efficient mode of destruction is to cover some of the common earth worms (*Lumbricus terrestris*), collected in a pot, with arsenic. When they are dead, and well inflated, they are thrown into the garden, and instantly eaten up by the ants, who also carry the worms to their nests, and they are thus poisoned in immense numbers.

Yours,

Boston, October 17th, 1836.

EMILIEN DE WAEL.

ART. V. *Observations on the Treatment of several Genera of the Natural order Iridaceæ.* By the CONDUCTORS.

SEVERAL of the genera belonging to this rather extensive natural order are among our most beautiful plants, and deserve an extensive cultivation. They are, a greater part of them, na-

tives of the Cape of Good Hope, and not sufficiently hardy to stand our climate, but require the protection and the warmth of a green-house to produce their flowers, and one or two genera are only brought to perfection in the stove or hot-house department.

We believe that not sufficient attention has been given to the plants belonging to this order by our amateur gardeners; whether this neglect has been from want of information in regard to their growth, or from an undue appreciation of their beauty, we are at a loss to suppose; but we are inclined to the belief that it is from both these causes combined: for we do not recollect of ever having seen many plants well grown, nor have we often found them in complete collections of other plants. We have consequently seized this opportunity to lay before our readers such information as we are possessed of, in the hope of drawing more attention to their cultivation.

The order Iridaceæ contains thirty-six genera, all of which possess considerable beauty. The genus *Iris* is well known, as two species are indigenous to our climate, and several others are among the most common flowers of the border known as the flower-de-lis: there are an immense number of species, nearly all of which are handsome plants, and we hope they will all soon be introduced; English catalogues enumerate from fifty to sixty kinds. The *Gladioli* have also long been cultivated, and are highly valued for their elegance.

The genera of which we propose some remarks are as follows:—

Gladiolus,
Ixia,
Sparaxis,

Anomathëca,
Watsonia,
Babiàna,

Antholyza,
Tritonia,
Hesperántha.

Gladiolus.—Plants of this genus are perhaps more cultivated than either of the others; some are perfectly hardy, and the others require the protection of the green-house. Several hybrids have been raised by the Rev. and Hon. William Herbert, of great beauty, and some other cultivators have also produced a number: we have no doubt but the varieties will eventually become very numerous, as the species seed easily, and the young plants come into flower sooner than most other bulbs. The following are a few of the finest:—

G. cardinalis.—This species is undoubtedly one of the most beautiful. The flowers are of a brilliant scarlet, from six to ten on a spike, and are extremely showy. It requires the protection of a green-house, and will not flourish in the open garden. We set out two or three bulbs in the autumn, in the border; but upon the approach of spring we found them completely rotten; they are impatient of too much moisture. The soil most suitable for all the *Gla-*

dioli is a mixture of sandy loam and peat, or decayed leaves, in about equal proportions. They are generally grown by crowding two or three bulbs into a pot not sufficiently large enough for one, which is one cause of their failing to produce flowers. Only one bulb should be placed in a number three pot; give a good drainage with potsherds: after they are potted set them in a frame, or, in want of this, plunge the pots in a warm aspect, in the garden, and cover them with an inch or two of soil, over which throw a few dry leaves or some old haulm: they may remain in this situation for a few weeks, until the approach of cold weather, when they should be taken up and removed to the greenhouse; if any heavy rains should occur while they remain in the ground, a few boards should be laid over them to prevent the soil from being too much saturated with water. No other care is requisite but to give the plants air, light and water, until they have blossomed and perfected their leaves, when the water should be applied quite sparingly, gradually giving less and less until the foliage is dried up, at which time it should be wholly withheld. The bulbs may then be taken out of the pots, and laid away in papers in a dry room, until the time of planting, which should be done in October or November. This species is not so easy of cultivation as the others, but its splendor will amply repay for all the care bestowed upon it. Seeds may be easily obtained, if the flowers are impregnated with some of the other species, and new varieties would probably be produced.

G. floribundus.—This is also a charming species. The flowers are of a yellowish-white, or cream-colored, very numerous, and collected in bundles, from whence its name. It is treated in the same manner as the *cardinalis*, and with much more certainty of its blooming well. It is a very beautiful and desirable species.

G. natalensis.—This very showy species, which has lately been introduced to our gardens, is very easily cultivated. The method of planting the roots and managing the plants is so well detailed in our I, p. 54, by a correspondent, that it is hardly necessary for us to say any thing here; for their cultivation in pots we shall refer the reader to those remarks, and confine ours, at the present moment, to their growth in the border.

The bulbs are perfectly hardy, and will produce their flowers in greater beauty when planted in the border, than when growing in pots: they should be set out in the month of October or November, in a rich light soil; placing them five or six inches under the surface. No more care is requisite. Upon the approach of spring the shoots will make their appearance above the ground; when they have attained to some height they should be tied to neat stakes, to prevent the spikes of flowers from falling to the ground.

In the autumn, as soon as the leaves have assumed a decayed appearance, the roots may be taken up and divided, and reset again. The after treatment is the same as in the preceding season. It increases very fast, and its simple culture will recommend it to every garden.

G. blándus.—A very delicate species, with flesh-colored flowers. It is cultivated in the same manner as recommended for the *cardinális*. It should be in every good collection.

G. hirsútus.—Another pretty species with pink flowers, and of slender growth. Cultivated like the *cardinális*.

G. tristis is also a very delicate species, with flowers of a brownish-yellow color. It requires the same management as the others. It is a good species to hybridize with the stronger growing ones. The Rev. and Hon. Wm. Herbert raised some fine varieties between this and the *blándus*.

G. byzantinus and *communis*, and the varieties of the latter, are perfectly hardy, and may be grown as recommended for the *natalénsis*. They are very showy when planted in beds by themselves.

G. var. pudibúndus. This is a hybrid (noticed at p. 63), raised by Mr. Herbert, and is said to be between the *cardinális* and *blándus*. The color is a charming rose, shaded into white at the base of the petals. It requires just the same treatment as the *cardinális*, and is a free bloomer, throwing up a spike two feet high, with twelve or more flowers.

G. var. Colvilli is a handsome hybrid, with scarlet and yellow flowers, and may be grown like the *cardinális*. It is a desirable variety.

There are many more species, but these are such as we can recommend for their elegance. A considerable number of varieties have been raised; but as we have never grown, or seen any particular account of, them, we cannot speak in regard to their merits. We hope, however, that all those of any beauty, or deserving of cultivation, will be soon introduced into our collections.

English cultivators state that the best plan for growing all the *Gladioli*, *ixias*, *watsonias*, &c., is in a brick pit, built so as to keep out the frost, and covered with lights, and, in severe weather, with mats, &c. The pit should be filled with the same soil as we have recommended, and the bulbs set about six inches deep. The sashes should be opened during all pleasant weather, and only kept closed when severe frosts occur, or when there is danger of a superabundance of wet, from long and continued rains. In this way they throw up very vigorous leaves and strong flower-spikes, which remain in beauty for a greater length of time than when growing in pots. We have no doubt but the same treatment might be practised here: the pit need not be built of more than one thickness of brick;

on the approach of our severe frosts, some dry leaves or coarse manure could be thrown up round it, to prevent any danger of freezing; the sashes could be kept open during all pleasant weather, until January, when the pit could be filled with dry leaves, and the sashes closed until the month of March: at this time the leaves should be removed, and, as the shoots make their appearance, give plenty of air, and protect at night with a covering of some kind over the lights, until April, when they may be wholly taken off.

Ixia.—This is a very interesting genus of plants, of a slender habit, with delicate and beautiful flowers. They are easily grown, and are desirable in the green-house, occupying but little room, where they continue in perfection from March to June. The following are some of the finest species.

I. viridiflora.—This is, in our opinion, the most beautiful: the flowers are of a bright green, with a dark spot at the base of each petal. It throws up a spike from twelve to eighteen inches in height, with upwards of twenty flowers: it should be in every collection of plants. This and all the other species may be treated as follows:—Plant the bulbs in number two pots, filled with a compost of sandy loam and peat, or leaf mould, in equal parts, three in each, in the month of October or November: place them in the green-house, under the stage, or in some situation where they will not receive too much heat and light, or set them in a frame for a few weeks, until they have filled the pots with roots: at the end of that time, if in the former place, they may remain until they bloom; or if in the latter, they can be removed to the green-house, to display their flowers. When they are first potted they should be watered rather sparingly, but as soon as they show any signs of throwing up leaves, give larger quantities: after the flower stems make their appearance the plants will need liberal supplies, which should be continued until the flowers begin to fade; it must then be gradually withheld until the leaves have dried up: the bulbs should then be taken up, separated, and put away in dry papers until the time arrives for planting again. English cultivators recommend growing them in pots or frames, in the manner of the gladiolus.

I. flexuosa.—A very delicate species, with pure white flowers. It grows about twelve inches high.

I. erecta is also a pretty species, with white flowers; it grows very erect, about a foot high.

There are many more beautiful species, and some varieties, but these are all we have grown ourselves. *I. patens*, *Helèni* and *cónica*, are said to be fine.

Sparaxis.—A not very extensive genus, but containing three or four species, of great elegance. The same compost as recommended for the *ixias* will answer equally as well for the *sparaxis*. The bulbs should be set out at the same season, and

in similar sized pots. They may also be grown in a pit or frame. Natives of the Cape of Good Hope.

S. tricolor.—A very showy species, with orange, yellow and brown colors, growing to the height of a foot or more. It should be in every collection of fine bulbs.

S. grandiflora.—This species does not grow quite so tall as the tricolor, but the flowers are nearly as beautiful; they are of a rich purple, and the largest of the species. The same treatment is to be observed in regard to this as with the others. There are some varieties of this species: *grandiflora* var. *striata* is one of them (sometimes called an *Ixia*). The flowers are straw-colored, with a stripe of pink through the centre of each petal: it is a very desirable plant.

S. versicolor.—Less beautiful than the others, but, nevertheless, very ornamental. The flowers are purple and yellow, and appear in a spike of some length. We have cultivated several pots of this species, and the following, and consider them as entitled to a place in every good collection. Same treatment as the others.

S. bicolor.—Similar to the last, except in the colors, which are brown and yellow (brown outside of petals, and yellow inside): grows to the same height (about a foot) as the versicolor, and requires the same management.

There is a sweet-scented and a few other species, but we have never grown them. We do not know that any attempts have been made to produce new varieties by cross impregnation; but we presume that it might be done, as some of them seed quite freely.

Anomathëca.—A genus containing only two species; *A. júncea* and *cruénta*. They are natives of the Cape of Good Hope, but require a somewhat different treatment from the genera we have spoken of. We have only grown the *cruénta*; it is a very beautiful little plant, and easily flowered in perfection.

A. cruénta.—The flowers are of a rich carmine, with a blotch of a deeper color at the base of each of the three lower sepals (or petals). It throws up a spike to the height of twelve or eighteen inches, on which appear two or three lateral branches, each containing from six to ten flowers: several of them are generally open at once, and make a charming display.

The bulbs may be grown in pots or in the border: The soil, in which they seem to flourish best, should be composed of sandy peat and loam, in the proportion of two thirds of the former to one third of the latter. The bulbs are about the size of an *ixia*, and three of them may be put into a number two pot. They should be planted in the month of January or February, just covering them with the compost, and placed under the stage, in the green-house, for a week or two, until they have made a few

roots. During this period they should be watered very sparingly, as too much moisture would endanger their rotting. At the end of this time they may be set upon the stage, with the other kinds, and watered more freely. They will soon put out their leaves, and will flower throughout the months of May and June. After the flowers have faded, gradually cease giving water, until the foliage has assumed a decayed appearance, when it must be wholly withheld. The bulbs are so small that they may remain in the pots, which should be kept in a shed or some other sheltered place, out of the way of wet. When the time arrives for planting again, they should be taken out of the pots, separated, and reset in a fresh compost, and the same treatment observed as before.

The bulbs may also be grown in the same manner as the tiger flower; and those persons who do not possess a green-house, can have their flowers in as good perfection as those who do, though not at the same season. They may be planted in the month of May, in the border, in a light rich soil, composed of leaf mould, or peat, and loam: they should be set about an inch deep and two or three inches apart. When the flower stems appear, tie them neatly to small sticks, to prevent their being broken by the wind. The bulbs may remain in the ground after they have done blooming till November, unless there is danger of severe frost, when it will be necessary to take them up and lay them away in dry papers, out of the reach of it, until spring.

This species produces seeds in abundance, which vegetate very freely, in a common hot-bed, planted in the month of February or March, in the same soil as recommended for the old bulbs. We have now growing in the open border a great number of plants from seeds sown last spring. The leaves are as vigorous as those on the old roots, and we have no doubt, from the appearance, that they will, some of them, produce flowers next season. The bulbs are so easily increased, that we hope they will soon become common in every garden.



ART. VI. *Notices of new and beautiful Plants figured in the London Floricultural and Botanical Magazines; with some Account of those which it would be desirable to introduce into our Gardens.*

Edwards's Botanical Register, or Ornamental Flower Garden and Shrubbery. Each number containing eight figures of Plants and Shrubs. In monthly numbers; 4s. colored, 3s. plain. Edited by John Lindley, Ph. D., F. R. S., L. S., and G. S., Professor of Botany in the University of London.

Curtis's Botanical Magazine, or Flower Garden Displayed, containing eight plates. In monthly numbers; 3s. 6d. colored, 3s. plain. Edited by William Jackson Hooker, L.L. D., F. R. A., and L. S., Regius Professor of Botany in the University of Glasgow.

Notes relating to Botany and Floriculture.—Mr. Nuttall has lately returned from the Columbia River, where he has collected and brought home dried specimens of a great many of the genera and species of plants first discovered, and introduced to England, by the meritorious Douglas. We are also happy to learn that he has brought seeds of several species, from which, we expect, many beautiful and rare things will be raised. This will be gratifying intelligence to those of our readers who have noticed the numerous plants which have been figured in the floricultural and botanical periodicals, from Douglas's specimens: we may now anticipate the introduction of some of them into our gardens in a short time. An account of the genera and species seen and collected, by Mr. Nuttall, will probably appear in the *Journal of Natural Sciences*, published at Philadelphia, which we hope, at some future time, to lay before our readers.

Sir W. J. Hooker.—The distinction of knighthood has been conferred upon this distinguished botanist by the king. The British government, until lately, has lavished all her honors upon the army or navy; while France, and even Russia, with its autocrat, has conferred them, not only on professors, but on “artists, architects, engineers, mechanics, manufacturers, physicians, lawyers, &c.” We do not regard such honors as of much consequence; but it certainly evinces a more liberal spirit than has heretofore existed with the English. No man could be more deserving of honor, of whatever kind it might be, than Dr. Hooker.

Mr. Douglas.—The Perthshire Horticultural Society have issued subscription papers, for the purpose of collecting a sufficient fund to erect a monument (in his native parish of Scone, Perthshire), to this indefatigable and much lamented botanist. The price of subscription is limited, to gardeners, from one to five shillings. Amateurs can give what they please, and the least sum will be acceptable. The subscription papers will remain open for an indefinite period, so as to give time for botanists, amateurs and gardeners, in all parts of the world, an opportunity to testify their gratitude for the labors of this enthusiastic traveler. The style and character of the memorial will be left to a committee, who will erect such a one as the funds collected will

justify. Blank subscription lists accompany each number of the *Gardener's Magazine*, from which we have condensed these remarks, and they have also, we believe, been sent to all the horticultural societies throughout the world. A list of the names of the subscribers will be published in the above mentioned work, and we hope that, among them, will be found those of many of our own countrymen, who know how to appreciate the services Mr. Douglas has rendered to botany and floriculture. Had a subscription list been sent to us, with a request to use our exertions to procure names, it should not be any fault of ours if we did not add a large number.

Euphorbiaceæ.

EUPHORBIA fulgens Karw.

A species under this name is mentioned, by a correspondent, in the *Gardener's Magazine*, as existing in the garden of M. L. Anderae, sen., of Frankfort. It was introduced from Mexico by the Baron Von Karwinsky, together with the *E. heterophylla Karw.* (pulcherrima Willd. Her.) He found them growing during his scientific journey, in that country, and brought living plants of them to Germany. The following description of it is given. "*Euphorbia fulgens* is an elegant and very ornamental plant, of the following characteristics: it is a branched, upright, leafy, freely growing, and freely flowering shrub. All its green parts bear a glaucous bloom. Its shoots are slender, twig-like, round, glabrous, and curved outwards in their terminal portion; bearing the flowers along this portion in groups, in the axils of the leaves. The leaves have petioles nearly one inch long, and disks that are lanceolate, tapered to both ends, entire, about three inches long, and from half an inch to one inch across in the broadest part. The groups of flowers are upon short stalks, and consist of from two to four flowers (as they would be ordinarily called), each upon a stalk about one inch long; and each showy from its involucre, which is of a bright red color, and which has a tube of less than half an inch long, and a horizontally spread border of a diameter somewhat less than that of a sixpenny piece, and consisting of five obcordate lobes. One may imagine that a bush, abounding in groups of these involucres displayed together, must be splendid, and well merit the application of the epithet *fulgens*: which, however, the inventor of the name may rather have intended to express a brilliance in the redness, than the general effect produced by a display of flowers of this color. The plant appears disposed to produce plenty of seeds." It has never been figured in any of the English botanical magazines. (*Gard. Mag.* for Aug., p. 390.)

POINSETTIA pulcherrima *Grah.*

This splendid plant is figured in the *Bot. Magazine* for June, t. 3493. The same correspondent, quoted under *Euphórbia fulgens*, states that the plant he saw in Germany and mentioned in his communication, is the *E. heterophylla Karw.* the same as that figured as *Poinsettia pulcherrima*. If this is true, it must have been introduced into Germany about the same time that it was brought to this country; as living plants, drawings, and dried specimens, of both this and *Euphórbia fulgens*, were received by that writer in May, 1835, from his brother in Vienna. It is somewhat singular, however, that plants have not found their way into English collections before this, or that some information respecting the existence of such in the continental gardens has not been made known before. We shall expect to see, in a future number of the *Gard. Mag.*, more information respecting this plant. (*Gard. Mag.* for Aug., p. 390.)

DICOTYLEDONOUS, MONOPETALOUS, PLANTS.

GENTIANA quinqueflóra *Willd.*

Synonyme: *Gentiana amarelloides. Mich. Pursh.*

I was kindly presented by a friend with some fine specimens of this elegant and rare gentiana, which were gathered in Sheffield, in this state, a few days ago. Growing to the height of about two feet, and bearing, on its quadrangular stem, successive verticils of delicate blue flowers, by twos, threes, and fives, it formed an elegant contrast with the decaying foliage of the year. It is greatly to be wished that this, with the inimitable fringed-corollæd species, *G. crinita*, could be introduced and cultivated in our gardens. How delightfully would their charming flowers appear amidst the purple and naked corolla of the *Cólchicum autumnale*, and *Cròcus serótinus*, and, now and then, a precocious phlox, tempted, by the balmy air and gladsome sun, to expand a few blossoms intended for the next spring. *Gentiana saponaria*, is, however, to be recommended as a fine and certain autumnal flower, thriving with great vigor in a moist and cool border, and even accommodating itself to the exigencies of its situation. When suffered to stand in the same place for several years, it assumes a strong and vigorous aspect, and becomes literally crowded with flowers. This species does not expand: the corolla is contracted at the apex. *G. crinita*, on the contrary, opens regularly on the approach of the sun's rays, and welcomes its genial beams by the exhibition of its rare beauty.

This last mentioned species may be found in seed at this season of the year. It is sometimes a rare, and again at other times a common plant, in the sphagnous swamps at Cambridge. Perhaps some of your correspondents or readers who have reared

the North American plants, and attended particularly to their cultivation, in England, could furnish your pages with some very valuable hints on the successful treatment of these unwilling guests of our gardens, though hardy inhabitants of our meadows and woods. Such information is much needed, and would be greatly promotive of an increased and national taste for our finer native plants, and the appreciation of their charms as well in the flower border as in their native localities.—*J. L. R.*

ART. VII. *Calls at Gardens and Nurseries.*

Amateur Garden of Mr. S. Walker, Roxbury.—October. We have been much pleased with a visit to Mr. Walker's garden; although so late in the season that the uncommonly early and severe frosts had destroyed the beauty of a larger part of the plants, still we found several pretty things to admire. Mr. Walker is noted as having produced some of the finest pansies that have ever been seen in the country; he is—as indeed who should not be—a great lover of these plants, and allows them a good share of his attention and care. He has imported many plants, and his seedlings, from seed of his own raising, have, many of them, surpassed in beauty some of the parents; much praise is due to Mr. Walker for his continued zeal and perseverance, in endeavoring to raise this beautiful plant to the place where it certainly belongs—among the florist's flowers—and we presume that he will dispose of duplicates to amateurs who are in want of some of his most brilliant kinds, or will exchange with other growers of this flower, who have succeeded in producing such as are worthy of a name. Some of Mr. Walker's best are *Othello*,—a very large flower, fine form, possessing all the properties of a good pansy, and of a deep rich purple color—and *Village Maid*. We found, at this late season, a bed of seedlings, with many flowers expanded, of considerable elegance, although they were not thought sufficiently so to deserve names.

Of pinks our readers are already aware that Mr. Walker has a fine collection, which he has only got together at much labor and expense. The plants are doing very well, and look vigorous and healthy; they are much easier grown than carnations, and we hope soon to see fine collections abounding in our gardens. Mr. Walker's article on the pink, at page 329 of the present volume, will give all necessary information regarding their cultivation. The double white rocket flourishes with the greatest luxuriance here, while the purple can scarcely be kept alive; we can only attribute this to the soil of the garden, which is a strong moist loam; from this same cause, that lovely plant, *Gentiana acaulis*, of which there is a small one in this collection, is growing well, and has spread over nearly a square foot of soil. We may therefore anticipate a sight of the flowers in the coming spring. *Cóchicum autumnale* we found in full bloom: this is, to the garden, in the autumn months of October and November, what the *Sanguinaria canadensis* is in the spring months of April and May—extremely showy,—and both of them should be found in every flower border.

Yucca filamentosa has stood out here for four or five years; it has, however, never flowered until the past season: it then threw up a flower spike to the height of six or eight feet, which remained in perfection for a great length of time. It receives no protection, but the points of the stiff and rigid foliage are tied together at the top, to prevent the snow and rain from entering too freely into the heart of the plant.

Mr. Walker has laid out largely for a tulip show the ensuing spring: he has planted upwards of one thousand bulbs, among which are many very fine kinds, such as Louis XVI, Strong's Charles X, &c. A large frame will be erected over the whole, to be covered with an awning, that the blooms may be screened from the sun, and thus kept in perfection for a great length of time. Mr. Walker has always grown a fine collection, but he has made many additions: he is in hope that, from the display which he intends to make, should nothing unforeseen occur, to excite a greater taste for this most gorgeous flower, which appears not to be so highly appreciated by our amateur gardeners as other plants. There seems to be a fear with some, of catching the *tulip-mania*, if they once enter into the cultivation of the finer kinds. We hope, however, such is not the case with all, and that, eventually, we shall find as magnificent collections in our vicinity, as at present exist in England.

Hawthorn Grove, Dorchester, M. P. Wilder, Esq.—Since our last visit to this place, there has been a large addition of fine plants made to the collection. Mr. Wilder has also extended the length of his range, by putting on an addition of about twenty-five feet, which he intends for a stove—he having concluded to make use of the former one for a show-house, or for the purpose of placing in the most magnificent and rare species and varieties, when in full bloom. We like this arrangement much, as often the more humble, and frequently the most rare plants, are lost from view, when standing on the stages with the other plants, by being encroached upon, or wholly covered up, by the foliage of some gross growing individual: here they will show to the most advantage, and when their flowers fade—and what is more unsightly than a plant in such a condition—they can be removed into their proper place, where such a blemish will be less observable: all will here be one mass of flowers—of varied hue and form—from the curious orchideous tribe, to the lovely ericas, or the splendid family of camellias. We are glad Mr. Wilder is one of the first to introduce a system, which we have long wished to see carried to its greatest perfection: although this will be on a limited scale, we hope to see it attempted with large span-roofed houses.

In the stove or hot-house department *Corræa speciosa*, *Trevirana coccinea*, *Nerine sarniënsis*, *Lobelia longiflora*, and several other common plants were in bloom. The *Nerine sarniënsis* or the Guernsey lily, of Mr. Wilder, is said by some amateurs to be *corüsca*; this is, however, an error: *corüsca* is scarlet, and not purplish-crimson, the color of the former. We flowered *corüsca* a year since, and afterwards gave the plant to Mr. Haggerston, at Belmont Place; whether it has flowered there this season we are not aware: it is far more beautiful than the *sarniënsis*, which does not merit the name of *corüsca*, or glittering. The latter is of a most dazzling scarlet, the petals completely covered with a metallic lustre, which no language can convey an idea of; we have never seen it in bloom only in our collection. We have no doubt of the correctness of Mr. Wilder's *N. sarniënsis*. We here for the first time saw a small plant of *Araucaria imbricata*, of which much has been said. It is one of the most splendid of the *Coniferae*. It is a native of Chili, and too tender to stand our climate, wholly exposed; but it possesses sufficient beauty to deserve a house by itself.

The collection of *Amaryllidæe* is continually increased, and several

fine *crinums* and *pancratiums* have been added: these are, for the most part, doing well; *Doryanthes excelsa* is just beginning to make a new growth. The orchideous plants are in very good condition; *Oneidium flexuosum* will probably produce flowers in a short time; there is no doubt these plants may be cultivated as easily as many others. Of the fine and valuable genus *Citrus* there are here upwards of thirty species and varieties, including some of the very best, both for the beauty and the quality of their fruit, and the elegance of their foliage. *Tropæolum peregrinum*, or the Canary-bird flower (noticed in l. p. 345), a plant of, is here growing in a pot: it was raised from seeds last spring, and will soon be in flower.

In the conservatory or green-house the camellias are coming forward very rapidly. The single white, double white, and double striped, have already opened some flowers. Since our last visit some extra large specimens have been added; they consist of the *Woodsi*, Greville's red, *althææflora*, double white, Hume's blush, &c., inarched, or grafted on the single or some other kinds, at the height of six or eight feet from the base of the stems; thus forming tree-like heads, in the manner of the tree roses. They are something new, but, we think, not in good taste, unless in remarkably high houses; in such a place they would have a grand effect. But for viewing individual flowers, or to observe the beauty of the foliage, they should be beneath the eye. A great many new sorts have been added, and some of them have singular looking foliage; we shall look forward with some interest to their blooming; *C. Kissi* is budded. Of acacias those charming species *dealbata*, *decurrens*, *verticillata*, *undulata*, *longifolia* and *spectabile*, are in this collection: the latter plant is showing buds, as it also is in our garden. Mr. Wilder has raised, from the seeds sent to the Horticultural Society by the Baron Von Ludwig, a large number of plants, ten or twelve, or more, kinds of heaths, and several New Holland plants. The heaths look very well. The arrangement of the plants is exceeding good, and the neatness which is preserved in every part of the range cannot be too much commended.

In the garden Mr. Wilder has made many alterations: new walks have been laid out, and the fence on the north side removed, so that it now includes three or four acres. A fine collection of pear trees has been planted, as also a good assortment of other kinds of fruit trees, particularly plums. Some of the young trees, of the Dutchess d'Angouleme, produced several very large pears this season. A spot of ground has been marked out, on which a rosary is to be planted: already many excellent sorts occupy part of the ground, and additions are to be made another season. In front of his dwelling house, are planted, in the flower borders, a great number of tree roses: these have made a very vigorous growth the past season, and will probably bloom finely the coming spring: among the number are several of the most beautiful varieties of the mosses. We hope that the tree roses will be more cultivated; they have a grand effect when in full flower.

We here saw a bed of very fine pansies; they were raised from imported seeds, but among them we observed some of considerable elegance. Next to Mr. Walker's, we may say that these were as fine as any we have ever observed. Not more than two or three are deserving of names, but they all form a handsome group, standing, as they do, in a small bed upon the turf. A row of them also runs parallel with the box edging, near to it, the whole length of one of the borders.

REVIEWS.

ART. I. *Elements of Botany*. By Asa Gray, M. D., Member of the Cosar. Acad. Naturæ Curiosum, and of the Lyceum of Natural History, New York. 1 Vol. 12mo. pp. 428. Carvill & Co., New York. 1836.

IF there are persons, and we doubt not there are many, who have felt a desire to become acquainted with that almost infinite variety of living organized substances, which, under the name of vegetation, in thousands of beautiful forms, and innumerable variations of structure, from the humblest moss to the loftiest forest tree, administer to the delights, the comforts, and the necessities of man—if any, we say, have felt such a desire, and have been deterred from so doing by opening a volume of one of the old authors on botany, filled with hard terms, dull explanations of classes and orders, and dry technical details, we commend them to the work whose title stands at the head of this article. Botany, a science which at the present day comprises some knowledge of more than two hundred thousand distinct individuals, is *not*, as some seem to suppose, simply an amusement for the idle, or a pastime for the curious; nor does the fact of being able to dignify a pretty blossom with a learned name constitute the sum total of botanical knowledge. It *is*, however, that branch of natural history, which, examining minutely that wonderful combination of vegetable forms which occupy so large a portion of the earth's surface, teaches us the manner of their construction, their distinctive characteristics, the relations they bear to each other, the uses to which mankind alike in a savage or civilized condition appropriate them, and the great and important services they perform in the economy of nature. It is that science, in the possession of which the lover of nature will find a volume perpetually new, and ever varied and instructive, open before him. If he ramble forth to the woods and hills, his walks will never be companionless—and there is no mountain so barren that it does not produce a few *lichens*—no sea so boundless but in its waters are found the ever flourishing *algæ*—nor any clime so bleak that the eye may not rest upon a few *mosses*, minute, yet not unimportant links in the great chain of creation. If in a strange land, it will instruct him how to distinguish wholesome vegetables from noxious weeds—nutritious fruits from poisons, and, at home, through it he may discover qualities and properties

in more familiar species, that will be of the greatest benefit to his fellow creatures.

The change which has been effected in this science of late years, by the introduction of the *Natural* system of arrangement into botany and botanical works, is not unknown to our readers. Before this, botany was charged, and perhaps justly, with being too much a science of names, and its teachers with neglecting investigations into the nature and qualities of plants themselves, for an eager pursuit of new species, or a vain desire of effecting some trifling alteration in classification. The labors, however, of such men as De Candolle, Jussien, Mirbel, Brown, Du Petit Thouars, Lindley, and others, have now left no grounds for such an imputation, and have raised it to a high rank as a philosophical science. Their inquiries into the structure and physiology of plants, their clear discrimination of the natural affinities and relations of the various groups and families, as they are stamped upon each individual and tribe by the laws of organization, and especially the singular and new facts developed by vegetable *morphology*, "which is, in the vegetable, what comparative anatomy is in the animal kingdom," have thrown a broad flood of light upon the subject, and opened a wide field for the display of talent. Minute and labored researches and investigations have been made, by the most distinguished botanists, into the structure of the different organs of plants—the motion of their fluids—the different phenomena of growth, and the metamorphoses effected by various laws and causes, in the highest degree interesting, as well to the skillful cultivator as to the purely scientific botanist.

In the work before us, the aim of the author seems to have been to exhibit a full view of the present state of the science, with all the recent improvements and discoveries, condensed into a clear and perspicuous treatise, which, being sufficiently popular in expression, should at the same time retain that rigid accuracy so indispensably necessary to so extensive a branch of natural science. In this Dr. Gray has succeeded perfectly, and, after a careful perusal, we cannot but express our admiration of the excellent arrangement of the subject, and the lucid manner in which the whole is illustrated and explained. Those persons who are not familiar with the large and expensive treatises published abroad, will find a great mass of new facts for study and digestion, and to those who are endeavoring to attain the elements of botany, we recommend this volume as a text book of the highest merit.

The author has divided his subject into seven heads, viz: The elementary organs of plants: Organs of vegetation: Nutrition: Organs of reproduction: Flowerless plants: Classification of plants: Glossology: with an appendix, containing ample directions for preparing *herbaria*, and a catalogue of the natural orders. We

have no room for extracts, but the following few words from the chapter on nutrition may be interesting to our readers.

“*Hygroscopicity*, or the property of absorbing or giving out moisture according to the nature of the body and the state of the surrounding atmosphere, is a property common both to organized and unorganized matter. Young tissues which are not filled up with foreign substances, are most active in taking up moisture; thus the spongelets of roots are eminently hygroscopic—the bark much less so. Sap-wood absorbs readily. Young branches of willow or poplar stuck in damp soil will take up sufficient moisture to keep the branch alive until new roots are formed. Heart-wood, on the contrary, being filled with solid matter, is not hygroscopic; hence it is more durable as timber, especially when exposed to humidity.

“But the absorption of moisture is controlled by a very remarkable power, lately discovered by M. Dutrochet, a distinguished French physiologist, called *Endosmosis*. This power undoubtedly exercises an important influence in vegetable physiology, as well as elsewhere. The general rule in respect to its operation is, that if two fluids of *unequal* density be separated by a membrane, even destitute of visible pores, the lighter fluid passes through the membrane, mingling with the denser. A simple experiment will illustrate this. If a short tube or phial, with the bottom broken off, be covered at one end with any vegetable or animal membrane, nearly filled with a solution of gum arabic and half immersed in water, the denser mucilage will attract the water through the membrane, and the tube will be filled. A small portion of the denser fluid also passes onward, and mingles with the water, but the preponderance is greatly in favor of the mucilage, and the denser the fluid, the stronger its attraction upon the water. Let the experiment be reversed, by filling the tube with water and immersing it in a vessel of mucilage, when, in accordance with the same rule, the water will slowly sink in the tube, which will at length nearly empty itself.

“This power offers a ready explanation of many acts of vegetable life which were formerly altogether inexplicable. Several instances will be adverted to in due time. We may here adduce a single illustration, viz. the growth of fruits. When a fruit, such as the peach or plum, begins to enlarge, its cells are filled with a fluid denser than the sap: by the property of endosmosis, therefore, they attract a large portion of the neighboring sap into the fruit, which in consequence becomes juicy. The density of the fluid is kept up by the continual evaporation of its watery portion, and thus the fruit is enabled to appropriate a great part of the food of the plant, which it changes into a pulp. In this, no doubt, we have also the true explanation of the fact that plants are weakened and their growth checked by bearing fruit; and that plants which flower but once (annuals and biennials), die for the most part soon after the maturation of their fruit.” (p. 105.)

When we mention that, with the exception of Professor Torrey's edition of “Lindley's *Introduction to the Natural System*,” this is the only work in which the modern views of the eminent physiologists of the day are brought forward in an American publication, we only announce how far in the rear we are in botanical knowledge, and at the same time confess how much room there is for improvement in the systems of teaching this science, pursued in our places of instruction. We hope to see Dr.

Gray's work in the hands of all persons, as an elementary text book, who really wish to acquire a knowledge of the most useful and interesting branch of human knowledge. For the future gratification of such, we are happy also to be able to state that the long expected work by that distinguished botanist, Professor Torrey, viz. a "*Flora of North America*," arranged in the *natural method*, is in course of rapid preparation, and the first volume will probably be published in the coming spring. Its completion will be looked for with an anxiety commensurate to the arduousness of the undertaking, and the high and well known abilities of the author for such a difficult and laborious work.—D.

ART. II. *The Gardener's Magazine and Register of Rural and Domestic Improvement*. Conducted by J. C. Loudon, F. L. S., H. S., &c. In Monthly 8vo Numbers; 1s. 6d. each. No. LXXVII, for August.

Art 1. "A Gardening Tour in Germany, made in the Spring of 1836, from April 17th to May 5th. By M. F. Rauch.

A very interesting account of some of the amateur gardens at Frankfort, Bonne, Cologne, &c., among which is that of the Prince of Salm-Dyck, remarkable for its magnificent and very complete collection of succulent plants. The principal nursery in Frankfort is that of M. Rinz, who is a very successful propagator of plants and, also, an excellent landscape gardener, he having laid out the public gardens at this place.

Of the many amateur and private gardens which abound in Frankfort, are mentioned those of the Baron Von Bethmann, Baron Von Rothschild, M. J. Andreae, sen., &c. The garden of the last named gentleman contains a fine collection of succulent plants. *Cereus senilis*, said to be a splendid species, is cultivated in the following simple manner:—

"The old plant is cut in two (transversely we presume), and the head planted, which produces a magnificent plant: the parent stem afterwards puts out young shoots every year, which are cut off when they are about the size of a large hazel-nut: and, after they have lain for some weeks in a dry place, they are planted in sand, and kept in a damp state till the young roots appear; when, by frequent watering, the plants will continue to grow well. It is necessary, however, to observe, that this operation should take place in a warm dry house, by which means the object in view will be sure to be effected."

The garden of the Prince of Salm-Dyck is situated on a gently

undulated plain, on the left bank of the Rhine, on the road leading from Dusseldorf to Aix la Chapelle. This is probably one of the finest gardens in Germany: the proprietor possesses great botanical knowledge, and has collected together a larger number of genera and species of succulent plants than can be found in Europe. To convey an idea of these, the writer gives the following account:—

“The whole collection of succulent plants amounts to about 1500—in which there are 296 mesembryanthemums, 115 cereuses, 76 opuntias, 47 mammillarias, 28 echinocactuses, 10 melocactuses, 9 rhipsalises, 7 pereskias, 196 aloes, 17 yuccas, 29 agaves, &c. Of this collection it may be sufficient to say, that it has only been brought to this state of perfection by great botanical knowledge and indefatigable industry. As the greater number of the plants were given to His Highness by the botanists who named them, it may easily be supposed they are correct, which is very seldom the case, where there are collections of succulent plants.”

The Prince of Salm-Dyck has published his *Hortus Dyckensis*, which will give all the information needed in regard to these plants: it may be had in both the German and French languages.

Art. 8. “On the culture of the *Solandra grandiflora*. By Mr. Thomas Symons.”

This writer has succeeded so well in the cultivation of this very beautiful plant, that he has communicated the following method of growing them:—

“It is well known that the *Solandra grandiflora* will grow many feet in height in one season, if under good cultivation, and left to its native luxuriance. When the plants under my care have attained the elevation required, which is about three and a half feet, I prevent them from growing higher, by nipping off the tops of the shoots; and, when the plants have arrived to the size desired, all the laterals are served in the same way. By adopting this mode, the plants throw out a vast number of spurs, which is a great object in the cultivation of the *Solandra*; and the plants assume a fine bushy shrub-like appearance. Early in January they are turned out of the pots, a part of their balls is removed, and they are repotted in compost, of one half rich loam, one fourth peat, and one fourth well decomposed leaf mould. The pots used are twelve inches in diameter. Little or no water is applied until there are indications of a movement in the sap. The plants are then slightly watered, increasing the quantity as the shoots advance, with water kept at a temperature nearly equal to that of the stove, which, at that season of the year, is from 55° to 60°. By the middle of January, the young shoots, together with the flower buds, begin to appear, when regular and rather plentiful watering is continued, till all the buds have perfected their blossoms, always remembering to use warm water; for if cold water be used, at this particular season, it will cause every bud to drop, and thus ruin all. All young shoots, not bearing blossom buds, when about two inches long, are shortened to one inch from their base as often as they appear.”

Under this management, one plant produced upwards of sixty of its beautiful blossoms; many of the spurs having two, and some

three flowers on each, and these succeeding each other for the space of six weeks or two months. The plants also produced seed pods, which will probably ripen.

Art. 10. Remarks "On the treatment of old Fruit Trees which it is wished to preserve: and on the advantages of laying cow-dung at the bases of their trunks, and also at the root-stalks of vines."

The object of this communication is to give some information to those proprietors of gardens who have old trees standing therein, that from particular associations of earlier days, or from other causes, wish them to remain, although quite barren of fruit, in regard to their treatment, so as to render them more valuable. He states that, wishing to remove a tree, his employer requested him not to do so, as he desired it to remain, but at the same time gave him directions to do what he could, to renovate it. The following is his method:—

"In the first place, I cut down the tree to the lowest live wood on the bole (which, in this case, was two and a half feet from the ground), leaving the branch twenty inches long; I then collected four barrow loads of fresh cow-dung, and laid it round the stem to the distance of four feet, on every side, and rising conically six inches above where the trunk was cut off; and, in order to conceal the unsightly appearance of the dung, I covered it with sand two inches thick. This was done in February: and in due time the live buds of the branch broke, and grew apace. During the heat of summer, the surface of the dung became finely pulverized; and, on examination, I found that strong healthy roots had issued from the bottom of the branch which was left, and had spread through the whole mass of dung which enveloped it. The following spring, I gave it another coating of the same, extending to the distance of six feet, repeating it the third year, and occasionally since. The result was, that the tree grew so rapidly, that I was enabled to form a handsome, well regulated, fan-shaped head, which fills the whole space [on the wall] of its original allotment, and has borne, for eight years past, excellent and abundant crops."

"Where vines are planted on the outside of forcing-houses, and the roots have got into improper sub-soil, the removal of the soil from the stem, and a barrowful of fresh cow-dung laid round them, never fails to cause the protrusion of strong vigorous roots: but it is advisable not to begin forcing too early, when it is applied, as the moisture, in very cold weather, may prevent the due circulation of the sap."

The continuation of a Review, in this number, of the *Horticultural Transactions*, is extremely valuable. A paper describing all the varieties of peas, with their numerous synonymes, is extracted entire; and we believe it will be so useful and interesting to our readers, that we have also copied it word for word. It was drawn up by Mr. George Gordon, under-gardener in the kitchen garden department. All the varieties of the pea have been grown in the Horticultural Society's garden, and they are arranged by Mr. Gordon into the following groups:—

"I. *Common Dwarf Peas*. With small roundish pods, white peas and stems, not more than 3 feet high.

"II. *Common Tall Peas*. With round pods, white peas, and stems requiring sticks.

"III. *Dwarf Marrow Peas*. With broad pods, peas particularly sweet when young, and stems not more than 4 feet high.

"IV. *Tell Marrow Peas*. Like the last, but with stems requiring sticks.

"V. *Sugar Peas*. With pods destitute of the usual tough lining, and eaten like kidney bean pods: the peas white.

"VI. *Imperial Peas*. With the strong growth of the marrow, and the small round pods of the Prussian.

"VII. *Prussian Peas*. With the stems branching very much, and roundish, not very large pods: the latest of any class.

"VIII. *Grey Sugar Peas*. With pods like those of the fifth class, but with flowers of a purplish color, and peas spotted, or any other color but white.

"IX. *Grey Common Peas*. With purple or white flowers, and peas any color but white.

"Group I. COMMON DWARF PEAS.

"1. *Bishop's Dwarf*.—About 2 feet high, and of strong growth. Pods short and broad, mostly containing 4 or 5 peas. Only a moderate bearer, a week later than the early frame, and hardly worth growing.

"2. *Early Dwarf*. *French Synonymes*: Nain hatif.—Height about 1½ feet, and somewhat resembling the preceding variety, but is more prolific; broad, mostly containing 5 peas. It is the best of the dwarfs, as it is very prolific, and of good quality.

"3. *Dwarf Brittany*. *French Synonymes*: Très-nain de Brétangne, très-nain de Brest.—About 6 or 8 inches high, of a dark green color, and of slender growth. Pods small and nearly round, mostly containing 5 peas. It is a few days later than the preceding, and is very fit for late sowing, as it is a good bearer.

"4. *Common Spanish Dwarf*. *French Synonymes*: Pois en éven-tail. *English Synonymes*: New early Spanish dwarf, Spanish dwarf or fan, dwarf bog, Knox's dwarf.—About 2 feet high, and of strong growth. Pods rather broad, flat, and not very long, mostly containing 4 or 5 peas. A moderate bearer, and a few days later than Bishop's, which it somewhat resembles. Mr. Bishop selected his pea from this variety. (See *Gard. Mag.* Vol. I. p. 127.)

"5. *Large Spanish Dwarf*.—About 3 feet high, and very strong. Pods longer than the common Spanish dwarf, and round, mostly containing 5 or 6 peas. Like the preceding, only a moderate bearer.

"Group II. COMMON TALL PEAS.

"6. *Early Frame*. *French Synonymes*: Pois le plus hatif, vert à rames de mont Julienne, Michaux de Holland, Pois Baron, Pois Laurent. *English Synonymes*. Best early, early single-blossomed, early double-blossomed frame, early one-eyed, double dwarf frame, single frame, early dwarf frame, superfine early, Batt's early dwarf nimble, early Wilson, Young's very early, early Nicholas, Perkins's early frame, Early Nana, Mason's double-blossomed, Russell's fine early, early French, dwarf Albany.—About 4 feet high, and rather slender. Pods small and round, mostly containing 5 or 6 peas. Very prolific, of excellent quality, and the earliest pea in the whole collection. The number of blossoms on this pea entirely depends on the soil and situation it is grown in. It must not be confounded with the early Charl-ton.

"7. *Early Charlton*. *French Synonyms*: Dominé Michaux ordinaire, Michaux de Ruelle, Michaux précoce. *English Synonyms*: Golden Charlton, early sugar frame, late dwarf, Twesly dwarf, Hotspur, Wrench's Hotspur, double dwarf Hotspur, early Hotspur, golden Hotspur, common Hotspur, early Nicholas Hotspur, Nimble Taylor, very fine late garden, Paddington, Essex Reading, Russell's early-blossomed.—About 5 feet high, and of strong growth. Pods large, broad, and rather flattened, mostly containing 6 or 7 peas. A very prolific bearer, of excellent quality, and the best pea for standing the winter in the collection. It is about a week or ten days later than the early frame, but will continue much longer in bearing, and, like the preceding, varies in appearance according to soil, situation, &c.

"8. *D'Auvergne*.—About 5 feet high, and rather slender. Pods very long, nearly round, much curved, and tapering a good deal to the extremities, mostly containing 11 or 12 peas (if well grown). A very abundant bearer, of excellent quality, and later than the early Charlton, in coming into use. It is the best pea for produce, and deserves to be generally cultivated in all gardens.

"9. *Eastern Shore*.—About 5½ feet high, and rather slender. Pods small, short, and round, mostly containing 4 or 5 peas. A very abundant bearer; coming after the Charlton.

"10. *Tall Frame*.—About 5½ feet high, and rather slender. Pods small, round, and rather long; mostly containing 6 peas. Very productive, coming into use about the same time as the Charlton, to which it bears some resemblance, but is taller, and of slenderer growth.

"Group III. DWARF MARROW PEAS.

"11. *Dwarf White Marrow*. *French Synonyms*: Hatif à la moelle d'Angleterre, hatif à la moelle d'Espagne, pois sanspariel. *English Synonyms*: Glory of England, wabash.—About 3 1-2 feet high, and very strong. Pods broad, and not very long, of a dark green color, containing 6 or 7 peas. Of excellent quality, but only a moderate bearer.

"12. *Knight's Dwarf Marrow*. *English Synonyms*: Dwarf Knight's, Knight's new dwarf.—About 3½ or 4 feet high, very much resembling the dwarf white marrow, but of stronger growth. Pods broad, and rather flat, containing 5 or 6 peas. Of excellent quality, and very prolific. The seed wrinkled when ripe.

"13. *Dwarf Green Marrow*. *French Synonyms*: Vert hatif à la moelle. *English Synonyms*: New green, early dwarf green, early green, new early green, royal dwarf marrow, new green nonpariel, Holloway marrowfat, new extra green marrow, Wellington, green Rouncival.—About 4 feet high, and of strong growth. Pods dark green, large, broad, and flat, containing 7 or 8 peas. Of excellent quality, very prolific, and rather late. Peas a light green color, and sometimes half green and half white when ripe.

"Group IV. TALL MARROW PEAS.

"14. *Tall White Marrow*. *French Synonyms*: Princesse vert gros Normand, De Marly, Suisse. *English Synonyms*: Tall Carolina, large imperial marrow, new tall Temple, Clive, Wootten, large Carolina, white Rouncival.—About 7 feet high, and of strong growth. Pods large, and very broad, containing 7 or 9 peas. Of excellent quality, very prolific and late. This is a very good pea for summer, but will not do without stakes.

"15. *Knight's Tall Marrow*. *French Synonyms*: Ridé hatif, ridé tardif, ridé. *English Synonym*: Knight's late.—About 6½ feet high, and of very strong growth. Pods large and broad, containing 8 or 9 peas. Of excellent quality, and later than the preceding by a week.

Peas, when ripe, shrivel very much, and are remarkably sweet. This pea is the best of all the tall ones for late sowing in summer.

"16. *Branching Marrow*. *English Synonymes*: Donn's new, prolific Isle of France.—About 5½ feet high, and of very strong growth. Pods large, and nearly round, containing 8 or 9 peas, of good quality, and very late.

"17. *Tall Green Marrow*. *English Synonymes*: Green tall, new large green, imperial green.—About 7 feet high, and of very strong growth. Pods large, broad, and rather flat, containing 8 or 9 peas, of excellent quality, late, and very prolific. Peas, when ripe, of a yellowish-green color.

"18. *Egg*. *English Synonymes*: Large egg or bean, Patagonian.—About 7½ feet high, and of strong growth. It greatly resembles the tall white marrow, but the peas are much larger and not so round; in other respects nearly the same.

"19. *Waterloo*. *English Synonyme*: Nonpareil.—About 6 feet high, and very strong. It has a great resemblance to the tall green marrow, but it does not grow so tall nor so strong. Peas green and rather wrinkled.

"20. *Pearl or Nonsuch*.—About 6 feet high, not of very strong growth, and bearing some resemblance to the tall white marrow, but the pods are rounder and much smaller. Of good quality, but a moderate bearer.

"21. *De Guiverigny*.—About 4½ feet high, of very strong growth, and resembling the dwarf white marrow, but much taller, and the pods are rounder: in other respects nearly the same.

"22. *Crown Pea*. *French Synonymes*: Turc ou couronné, turc à fleurs blanches. *English Synonymes*: American crown, rose or crown.—About 5½ feet high, of very strong growth, with the blossoms in tufts at the extremity, somewhat like a crown (from which it derives its name). Pods small, round and straight, containing 5 or 6 peas. A very abundant bearer, of good quality, and very good for summer use.

"N. B. Nos. 20 and 22 should, perhaps, be referred to the 2d Group: but, on account of their strong growth, I have placed them in the 4th Group: they differ from it only in having small pods; and from the 2d Group in growing very strong, and being late.

"Group V. SUGAR PEAS.

"23. *Large Crooked Sugar*. *French Synonymes*: Sans parchemin blanc à grandes cosses, mange-tout. *English Synonymes*: New pea, sugar pea, broad-sword, early Spanish.—About 6 feet high, and very strong. Pods very large, broad, and much twisted, containing 9 peas. Peas large, and very prominent in the pods. Of excellent quality, very productive, and the best in this class.

"24. *Vilmorin's Sugar*.—About 6½ feet high, and of slender growth. Pods small, round, and straight, containing 7 or 8 peas; which, as in all the other sugar peas, are very prominent, even when quite young. Of excellent quality, and the greatest bearer in this class. It was received from M. Vilmorin as 'espèce de pois très-excellent.'

"25. *Alberjas*.—About 6½ feet high, and of strong growth. Pods small, round, and straight, containing 7 or 8 peas. Of excellent quality, and very prolific. It was brought from Mendoza, by Dr. Gillies. There is sometimes a very thin skin inside the pods of this sort, which makes it distinct from all others in the class.

"26. *Tamarind Pea*. *English Synonyme*: Late dwarf sugar.—About 4 feet high, and of robust growth. Pods large, broad, and much curved, containing 9 or 10 peas. Of excellent quality, and a very abundant bearer. The pods are from 4 inches to 5 inches long, and are produced the latest in this class.

"27. *Early May Sugar*. *French Synonymes*: Nain à la moelle d'Espagne. *English Synonymes*: Early Dutch, early sugar, dwarf Dutch sugar.—About 4 feet high, and very slender. Pods small, round, and straight, containing 6 or 7 peas. Of good quality, but only a moderate bearer. This is the earliest pea in the collection, but is very tender, and will not do to sow before the beginning of March.

"28. *Dwarf Sugar*. *French Synonymes*: Gros nain sucré, nain sucré. *English Synonymes*: Ledman's dwarf.—About 3 feet high, and of very strong growth. Pods long, nearly round, and slightly curved, containing 7 peas. Of excellent quality, a moderate bearer, and late.

"29. *Dwarf Dutch*. *French Synonymes*: Nain hatif de Hollande, nain de Hollande. *English Synonymes*: Dwarf sugar de Grace, early dwarf de Grace, dwarf crooked sugar.—About 2½ feet high, and of slender growth. Pods rather short, small, and crooked, containing 5 peas. Of good quality, only a moderate bearer, and later than the preceding by a week.

"30. *Late Wyker Sugar*. *English Synonymes*: Late white sugar.—About 6½ feet high, and of very strong growth. Pods roundish, small, and much curved, containing 7 or 8 peas. Of excellent quality, a good bearer, and very late.

"N. B. The pods of all the peas belonging to the 5th Group should be gathered when quite young, like French [string] beans, and cooked after the same manner, without being shelled.

" Group VI. IMPERIALS.

"31. *Dwarf Imperial*. *French Synonymes*: Nain vert impérial, nain vert gros, sans parchemin vert. *English Synonymes*: Imperial, blue imperial, dwarf green imperial, new improved imperial, new improved dwarf imperial, new dwarf imperial, new long-podded imperial, Sumatra, green nonpareil, dwarf blue prolific, blue scimeter, sabre, blue sabre, new sabre, dwarf sabre.—About 4 feet high, and of strong growth. Pods large, long, and rather flat, much pointed, and containing 8 or 9 peas. Of excellent quality, a good bearer, and one of the best peas for summer, as it is very late in coming into use.

"32. *Tall Imperial*. *French Synonymes*: Carré vert, carré vert gros Normand. *English Synonymes*: Tall green imperial, tall blue imperial, Spanish patriot, new tall imperial, blue union, green nonpareil, tall Prussian or blue union.—About 7 feet high, and rather slender. Pods broad, and rather short, but not pointed, like those of the preceding, and containing 6 peas in a pod. Of good quality, and very productive, but not so late as the last.

" Group VII. PRUSSIANS.

"33. *Blue Prussians*. *French Synonymes*: Nain vert petit, nain royal, gros vert de Prusse. *English Synonymes*: Dwarf blue Prussian, royal Prussian blue, fine long-podded dwarf, Prussian prolific, early Dutch green, green Prussian.—About 3½ feet high, and of strong growth. Pods long and rather round, containing 8 peas. This is so well known that it is quite useless for me to say any thing about its good qualities. It is undoubtedly the best for summer use, and one of the greatest bearers.

"34. *White Prussian*. *English Synonymes*: Prolific or poor man's profit, prolific, tall Prussian, dwarf white Prussian, new dwarf Norman, royal dwarf, royal prolific, dwarf Tewsls, Stowe pea.—About 4 feet high, and very robust. Pods broad, long, and rather flat, containing 7 or 8 peas, which are large and white, of good quality, and, like the blue Prussian, an excellent summer pea, and very prolific. This is the best sort for general cultivation, and well deserves the name of poor man's profit: but it will not remain so long in bearing as the blue Prussian.

"35. *Groom's Superb Dwarf Blue*.—About 18 inches high, and of robust growth. Pods large, broad, and rather flat, containing 8 or 9 peas. Of excellent quality, a very abundant bearer, and a few days later than the blue Prussian, of which it seems a distinct dwarf variety. Raised by Mr. H. Groom, of Walworth, who sent seeds of it to the garden, in 1831. This deserves general cultivation, as it requires no sticking, and produces more on the same space of ground than any other dwarf sort.

"Group VIII. GREY SUGAR PEAS.

"36. *Purple-podded Grey*.—About 7 feet high, and of robust growth. Pods short, broad, and rather pointed, of a deep purple color, containing 5 or 6 peas. A good bearer: the peas, when boiled, are rather bitter; but, if cooked like the pods of the scarlet runner kidney bean, it is very good.

"37. *Red-flowered Sugar*. *French Synonymes*: Sans parchemin à fleurs rouges.—About 6½ feet high, and of slender growth. Pods long, nearly round, and straight, containing 6 peas. Like the preceding, it is only fit for use when quite young. A good bearer.

"38. *Fishamend's Sugar*.—About 7½ feet high, and very robust. Pods very long, broad, and much curved, containing 8 or 9 peas, which are rather small, of a greenish-yellow color, dotted all over with small purple dots. A good bearer, and the best of all the sugar peas (except the large crooked sugar) for use when young.

"Group IX. GREY COMMON PEAS.

"39. *Grey Rouncival*. *English Synonymes*: Giant, Dutch.—About 8 feet high, and very robust. Pods broad, but not very long, and rather flat. Peas of a brown color, black-eyed, and spotted with yellow. A good bearer, but only fit for field culture.

"40. *Late Grey*. *English Synonymes*: Tall grey, tall Capucine, large grey.—About 8 feet high, and very robust. Pods broad, but not very long, containing 7 or 8 peas, of a yellowish brown color, black-eyed, and large. A good bearer.

"41. *Maple Grey Pea*. *English Synonymes*: Marlborough, partridge grey.—About 7½ feet high, and very robust. Pods broad, and rather long, containing 7 or 8 peas, which are like those of the preceding kind, but much smaller, and not black-eyed. This is a good bearer, and the flowers are much lighter colored than those of No. 40.

"42. *Spanish Marotta*. *French Synonymes*: A' œil noir, Michaux à œil noir. *English Synonymes*: Tall black-spotted marotta, black-spotted.—About 6 feet high, and rather slender. Pods small, and nearly round, containing 7 peas, of a yellow color, black-eyed, small and round. It is very productive, and tolerably good if gathered when young, as it is by no means so bitter as the other grey peas when boiled.

"43. *Bean Pea*. *English Synonymes*: Funnell's black-spotted.—About 8 or 9 feet high, and very robust. Pods long, broad, and not much pointed, containing 9 or 10 peas, of a yellowish white color, black-eyed, and having some resemblance to small horse-beans when ripe. It is very productive, but only fit for field culture, as it is rather bitter when boiled, although not so bitter as grey peas in general.

"The following are the best sorts (particularly those marked *):

"*For Early Sowing*. Pois nain hatif: *Early frame, *early Charlton, *d'Auvergne.

"*For Late Sowing*. Knight's dwarf marrow, *Knight's tall marrow, tall green marrow, *crown, branching marrow.

"*Sugar Peas*. (Not to be sown before the 1st of March, [in England.]) *Early May, *large crooked, *Vilmorin's sugar, *new tamarind.

"*Dwarf Blue Peas for summer use.* Dwarf imperial, *blue Prussian, *white Prussiau, *Groom's superb dwarf blue."

We hope that this careful and probably very correct list, will be a guide for all seedsmen in the sale of seed peas.

ART. III. *Report of the Committee of Arrangements of the Third Annual Exhibition of the Columbian Horticultural Society, June 8th and 9th, 1836, with the reports of the standing Committees upon the objects exhibited, and those entitled to premium.* Pamphlet 8vo, pp. 44. Washington, 1836.

THIS report is got up in a style which gives much credit to the society from whence it emanates. It contains a report of the committee of arrangements of the third annual exhibition, in June last, with a full and particular account of the various things exhibited. After this come the reports of the several committees on fruits, flowers, vegetables, &c., stating the best specimens that were exhibited, and the award of the premiums to the successful competitors. Then follows a recapitulation of all the exhibitions held between the second and third annual meetings. The whole of the reports appear to be made up with much care, and the names in most instances spelt correctly, a thing not generally attended to. As we shall give an account of every thing worthy of notice, exhibited, in our December number, we shall refer our readers to that, which will show them how far advanced our southern friends are in horticulture and floriculture.

The manner in which this report is published is worthy of imitation by all the horticultural societies in the country. How much better suited to the purposes for which it is intended, and how much more convenient to the amateur is such a report, than the method followed by the Massachusetts Horticultural Society, of giving detached accounts in a periodical which, perhaps, few that are interested see, and where, a greater portion of the time, the botanical names of shrubs and flowers are allowed to come before the public so barbarously spelt, that few persons would know what plants they were. Instead of an easy reference, as is the case with this report, the horticulturist or florist has to wade through a voluminous mass of uninteresting matter, spending hours in searching out what information he is in want of, while, if the whole was contained in a pamphlet of forty or fifty pages, he could turn to any part of it in a moment. We certainly hope that such a course will be pursued in future: the whole might be printed and bound in with the annual address, making altogether an interesting and desirable pamphlet to the amateur horticulturist.

ART. IV. *New-York Farmer and American Gardener's Magazine*. In Monthly Numbers. Quarto. Three dollars a year, in advance. Nos. 1 to 10, from January to October, inclusive. New York. 1836.

THIS work is, in reality, what the first part of its title indicates, a farming periodical: the quantity of matter, particularly original, which relates to gardening, being but a very small portion, compared with that treating upon agriculture. It has now reached the ninth volume (sixth of a new series), and has been, we believe, a very useful work. We know not but what it may still be so, and we hope it is. We have not, however, noticed it at this time to discuss its value to the agricultural, or even gardening portion of the community, but to make a few remarks respecting the conducting of the work.

To gather and diffuse useful information, in whatever manner, either by original communications, or by extracts from cotemporary journals, should be the object of a periodical work treating upon any subject connected with the sciences or the arts. But that magazine, paper, or journal, which contains the most original information, and which is continually bringing forward such to the notice of the public, must, in the view of all, not only be thought, but in reality be, the most valuable and interesting work. In such a one, new ideas are advanced, suggestions thrown out, successful experiments detailed. But the task of conducting such a work is no easy one, and requires not only unremitting labor and attention on the part of the author, but the aid and co-operation of those who are interested in the subject of which it treats. Nor is this alone all: the expense attending the publication of a periodical containing original contributions is very great, and hence it can only be carried on with success, when a good circulation is obtained. But the mass of the reading public call for cheap publications, and whether such are got up by fair or unfair competition, it matters not. A work is published composed wholly, or in part, of extracts made up from some original periodical. The authors of the former, seizing upon the contributions of the latter, appropriate them to their own use, and, spreading them before the public, completely paralyze the efforts of those who have labored to gratify their patrons. There are those, it is true, who know how to appreciate the latter: but they are few in comparison with the many: and while that magazine or paper containing original information is suffered to languish, that filled with extracts receives a liberal support.

But we come to the subject at the head of this article. Until

lately, only the name of the proprietor has appeared on the title page of the *New York Farmer*. The contributors are few in number. A writer under the signature of H. C., which we may interpret as the Rev. Henry Colman, appeared in the previous numbers of the present volume, and the value of the communications need not be told, when we have said this: with the exception of Judge Buel, we know of no other writer upon agriculture whose sound opinions we so highly value, and from whom the farming public have received more practical information. But of late the signature of H. C. does not appear. Since the establishment of our magazine, there seems to have been a jealousy, on the part of some agricultural papers, in regard to its circulation, as if it would interfere with theirs: but so far from doing this, on the contrary, we believe it has increased their subscription lists, while our own has received but little benefit. Very few have bestowed but a passing notice upon it, unless we except the *New York Farmer*, which has done so to such a degree, as to make that work a medium through which all, or a greater part, of the original information contained in our magazine, is circulated to the amateur horticulturists in that state. We have forbore finding fault with the editors of this work, thinking they might see the injustice of this course, until we have been compelled to do so, from a sense of duty to our numerous contributors, and to ourselves.

In the present volume of the *New York Farmer*, are included a large number of the original communications which have appeared in our magazine. These are generally, it is true, copied with acknowledgment, though we are sorry to say, in some instances without it. In the number for *March*, are no less than *ten columns*, consisting of two long, and, we believe, considered very valuable articles; and these taken, too, from our *March* (!) number, which appeared but a week or two previous. From the commencement of the January number to the last one published (October), there has appeared no less than *thirteen* articles from our work, making *fifty-two columns* of matter in the *Farmer*. At page 167 and 102, are two articles by our correspondents, signed Junius and S. Pond, copied without any acknowledgement; and these have been the rounds of the agricultural papers throughout the country, credited to the *New York Farmer*. The last number for October contains *four* articles, from our magazine, for the previous month, taking up *twelve columns*, which is nearly one half the original matter in our September number.

Of the ungenerousness of such a course, we are certain the conductors, if they at once reflect, must be convinced. In regard to those articles copied without acknowledgement, they must be aware that it is deceiving the public to call that original which has already appeared in another work. To copy from

one magazine into another, is perfectly just and fair, provided the one quoted from has been for some time before the public: but to fill the pages of a magazine with extracts from another that has just appeared, is not only unjust but absolutely wrong; any one who knows the trouble of preparing an original manuscript for publication, is aware that it is quite another thing from copying from that which is already printed.

We cannot refrain from quoting the language of Mr. Loudon, in a review of a cotemporary work. "Supposing," he says, "it were lawful to copy the greater part of one magazine, just after its appearance, into another magazine sold at the same price; it is evident that, while the magazine containing original matter was losing, the other which copied from it would be making a handsome profit. The losing magazine would have no alternative but to give up appearing, or to adopt the practice of the other, and to take its articles ready prepared, from some other published work. Both magazines, in consequence of this, would be rendered almost worthless to the public."

We hope we have said enough to convince the conductors of the *New York Farmer*, that the course which they have pursued is both illiberal and unjust; illiberal—to extract so largely from our magazine,—and unjust in doing so without giving due acknowledgment for the same. We hope for the future that such a practice will be discontinued. We care not how many horticultural periodicals are projected: ours was the first which has succeeded in the country, and we hope, by a continuance of the same care and attention which has heretofore secured it favor, to make it superior to any other that may be published.

MISCELLANEOUS INTELLIGENCE.

ART. I. *Domestic Notices.*

Gladìolus natalénsis.—This species with me has done wonders. It sent up three spikes about four feet high; one with thirteen flowers, the other two with twelve flowers each, besides a lateral branch, with three or four flowers or more. It ripened plenty of apparently perfect seeds, which I planted as soon as ripe.—*Yours, M. A. W., Athens, Ga., August 29th, 1836.*

Gladìolus lineàtus.—This plant is very exactly figured and colored in

Redouté, as a variety under that name: but is probably *Tritonia lineata* of Loudon's *Encyclopædia of Plants*. My *G. Watsonius* answers well to the technical description, but does not exactly agree in color with *Redouté*: the leaves are very singular, and it is altogether a very graceful and desirable plant. *Watsonia Meriana* has flowered finely.—*Ib.*

Amaryllaceæ.—Did not one of your correspondents promise a list of such species and varieties of this family as require to be kept dormant for a time, to ensure flowering? I want much to see it: I have a very pretty collection, but several are too shy of flowering for all my art—especially *Griffinia hyacintha*.—*Yours, W., September, 1836.*

Cyclamen persicum.—Two or three roots of this species of cyclamen stood out, during all last winter, in the garden of Mr. S. Walker, of Roxbury, without protection of any kind, other than that afforded by the snow. They have thrown up vigorous leaves, and, as soon as the roots get stronger, will probably flower. Mr. Walker thinks that by treating plants in this way, if they continue to endure our severe winters, their season of flowering may be reversed, and the blossoms appear in early spring, instead of their usual time, when growing in pots, in October and November.—*Conds.*

ART. II. Retrospective Criticism.

Scolopendrium officinarum not a rediscovery.—On the 389th page of No. XXII. of your Magazine, Messrs. Conductors, it is observed by your valuable correspondent that this rare fern had lately been rediscovered by Prof. Torrey, at Chittengo Falls, N. Y., and that previously it had not been seen by any botanist since first found and described by Pursh. The accuracy of this last named and distinguished botanist had therefore been questioned; and Beck, in his "*Flora of Northern and Middle States*," thinks it very singular that Pursh should have *only* observed it in this country. I however find it in Riddell's "*Synopsis of the Flora of the Western States*," sp. No. 1755, as growing in shady woods and rocky situations about Louisville, though quoted with a query; and what is of still greater importance and puts the matter beyond doubt, Nuttall, in his "*Genera of N. A. Plants*," tells us, that he has seen it living ("v. v.") "in the western parts of the State of New York, in the crevices of calcareous rocks," &c. In justice to this excellent botanist and to truth, I have thought it advisable to endeavor to correct a seeming mistake on the subject.—*J. L. R.*

Quere.—What are the specific characters and distinctions by which Dr. Graham's *Poinsettia pulcherrima* and Rafinesque's *Pleuradæna coccinea* (its synonyme), is separated from the Linnæan *Euphorbia*? [As soon as our English botanical periodicals reach us, in one of which this is figured, our correspondent shall be furnished with the requisite information, of which at present we are as ignorant as himself.—*Conds.*]

ART. III. *Massachusetts Horticultural Society.*

Saturday, September 24th. We gave an account of the fruits and flowers exhibited on this occasion, in our last. Officers for the ensuing year were chosen at this meeting, viz:—Elijah Vose, president; E. Bartlett, Jonathan Winship, S. A. Shurtleff and John Prince, vice-presidents; William Worthington, treasurer; Robert Treat Paine, corresponding secretary; E. Weston, Jr., recording secretary; John Lewis Russell, A. M., professor of botany and vegetable physiology; T. W. Harris, M. D., professor of entomology; J. W. Webster, M. D., professor of horticultural chemistry. Various committees on fruits, flowers and vegetables, were also chosen.

October 1st.—Exhibited. From S. Sweetser, dahlias, viz: Countess of Liverpool, King of the Yellows, Loveley's Earl Grey; Widnall's Perfection, Lady Grey, King of the Whites, National Guest, Widnall's Clio, Inapproachable, Maid of the Mill, Springfield Rival, Granta, Queen of the dahlias, Queen of Whites, &c. From Hovey & Co., several varieties, including Brown's Desdemona, Beauty of Cambridge, Urania, Brewer's Rival King, Widnall's Venus, Well's Penelope, Mrs. Wilkinson, Dutchess of Buccleugh, Metropolitan Perfection, Widnall's Hebe, (?) Well's Zarah, and Bride of Abydos.

Fruits: From M. P. Wilder, Marie Louise pears. From S. Philbrick, Heathcot, Duchess d'Angouleme pears. From S. Downer, wine apples. From S. Pond, plums, name unknown. From L. B. Grosvenor, pears, name unknown. From John Prince, Easter beurré pears. From S. R. Johnson, sweet water and black Hamburg grapes. From E. R. Tileston, native wild grapes.

October 8th.—Exhibited. From S. Walker, dahlias, viz:—Well's Enchantress, Beauty of Cambridge, Priestley's Enchantress, Brown's Ophelia and Widnall's Perfection; also, fine seedling pansies. From S. R. Johnson, several kinds of dahlias. From Hovey & Co., bouquets of flowers.

Fruits: From E. Vose, 'Echasserie, Andrews, Johonnot, long green or mouille bouche pears, and a kind the name unknown. From Dr. Swan, Medford, a pear, the name unknown. From S. Pond, Violette Imperatrice (heretofore erroneously called Semiana) plums, and the fruit of the *Cydonia japonica* or Japan pear; also, Julianne pears. From Geo. Newhall, Tolman's sweeting, and several other varieties of apples: Brocas bergamot pears. From E. Sharp, Alexander apples.

October 15th.—Exhibited. From S. R. Johnson, dahlias, viz:—Mrs. Wilkinson, Erecta, Duchess of Bedford, Rose d'Amour, and Lady Grey. From S. Sweetser, Priestley's Enchantress and Springfield Rival dahlias. From Hovey & Co., phloxes, dahlias, double asters, &c.

Fruits: From S. Pond, Fulton and Johonnot pears, and Violette Imperatrice plums. From S. A. Shurtleff, Shurtleff's seedling grapes. From Dr. Swan, Andrew's pears. From E. Bartlett, Dix pears. From S. R. Johnson, white sweet water and black Hamburg grapes.

October 22d.—Exhibited. Fruits: From S. Downer, Seckel, Passe Colmar, Fulton, Urbaniste, Autumn beurré, beurré Diel, Duchess d'Angouleme and Cumberland pears; also, snow apples. From R. Manning, belle lucrative, St. Ghislain, Saunder's beurré, and capsheaf pears; also, Italian prunes. From S. Pond, Julianne, Johonnot and Fulton pears, and a kind unknown. From E. Vose, Seckel, Lewis, Heathcot, Urbaniste, Brocas bergamot, and belle lucrative pears. From Dr. Burnet, Southboro', Burnet pears, a fine native fruit. From I. Clapp, South Reading, Platt's bergamot pears, and two varieties of apples. From J. Eustis, York russet apples. From G. Parsons, Esq., Porter apples.

ART. IV. Quincy Market.

		From	To			From	To
<i>Roots, Tubers, &c.</i>		\$ cts.	\$ cts.	<i>Pot and Sweet Herbs.</i>		\$ cts.	\$ cts.
Potatoes :				Parsley, per half peck,		25	
Common, { per barrel,	1 50	1 75		Sage, per pound,		17	20
	{ per bushel,	62½	75	Marjoram, per bunch,		6	12
Chenangoes, { per barrel,	1 75	2 00		Savory, per bunch,		6	12
	{ per bushel,	62½	75	Spearmint, per bunch,		6	
Eastport, { per barrel,	2 25	2 50					
	{ per bushel,	1 00	1 25				
Sweet Potatoes, per bushel,	1 50						
Turnips :							
per bushel,	75						
Onions :							
per bushel,	1 00	1 25					
red, { per bunch,	4	6					
white, { per bunch,	4	6					
Beets, per bushel,	75	1 00					
Carrots, per bushel,	75	1 00					
Parsnips, per bushel,	75	1 00					
Salsify, per bunch,	12½						
Horseradish, per pound,	8	12½					
Radishes, per bunch,	10	12½					
Shallots, per pound,	20						
Garlic, per pound,	14						
<i>Cabbages, Salads, &c.</i>							
Cabbages : per dozen,							
Savoys,	50	75					
Drumhead,	50	1 00					
Red,	1 00	1 50					
Cauliflowers, each,	25	50					
Lettuce, per head,	8	12½					
Celery, per root,	12½	25					
Tomatoes, per half peck,	25						
<i>Squashes and Pumpkins.</i>							
Canada, per pound,	6	7					
Winter crook neck, per pound,	4						
Lima, per pound,	4						
Pumpkins, each,	12½	20					

REMARKS. The unparalleled severity of the weather during the present autumn up to this date, has cut short the crops in this vicinity, in many instances; cabbages have not headed so well as usual, and cauliflowers, brocolis, &c. have not attained to a large size. Of potatoes there is not a large supply. Several cargoes have arrived from the eastward, but they have all been taken at advanced prices from our last; Eastports are quite scarce and bring the prices in our quotations, by the quantity. Sweet potatoes are tolerably abundant, and of fair size and quantity. Turnips are getting scarce. Onions are not plenty, but the prices are moderate. Beets, carrots, and parsnips, have come

to hand, though not in so large quantities as in general. Salsify is more eagerly sought after than heretofore. Fine radishes have come to hand of the new fall crop.

Of cabbages there is a scanty supply: drumheads and red cabbages are very scarce, and prices high. Cauliflowers are not plentiful. Lettuces from the new crop are brought in of good size. Tomatoes are nearly all gone. Canada squashes are scarce; as indeed are all sorts: a few Limas are to be had at our quotation; no West Indias have yet arrived.

Apples are tolerably plenty and of very good quality. New York pippins, from New York, have been received in quantities. Of pears there is a very good supply, and some excellent kinds are to be had. We do not ever before recollect of seeing so many fine ones in the market; we have noticed Fulton's, Seekels, Wilkinson's, the Brocas bergamot, Urbaniste, Andrews, Capiaumont, Heathcot, &c. It is gratifying to find these taking the place of the St. Michaels, although we regret that some measures are not taken by fruit growers to restore this excellent pear to its original character; those received from New York and Philadelphia are beautiful. Quinces are not plentiful. Cranberries are exceedingly scarce, and prices very high. Watermelons are all gone. Grapes are tolerably abundant; Isabellas have not ripened well this season. Chestnuts and walnuts of the new crop have come to hand; the former are very scarce: the early frosts have ripened them prematurely; those received were from Philadelphia. *Yours, M. T.,*
October 22, 1836.

ART. V. *Meteorological Notice.*

FOR SEPTEMBER.

SEPTEMBER was rather a dry and cool month. Up to nearly the last of it there were only one or two very light showers. There were also several very cool nights, accompanied with some frost in low situations; on the night of the 6th, vegetation was wholly destroyed by its severity, in many places. The night of the 29th was so cold, as to kill all tender plants in the vicinity of Boston. Prevailing winds, easterly.

THERMOMETER.—Mean temperature, 56° 20'—highest, 83°; lowest, 29° above zero.

WINDS.—N. two days—N. E. six—E. eight—S. five—S. W. four—W. four—N. W. one day.

Force of the Wind.—Brisk, twelve days—light, eighteen days.

Character of the Weather.—FINE, ten days—FAIR, eight days—CLOUDY, twelve days.

Showery, one day—*Misty*, two days—*Rainy*, five days.

MONTHLY CALENDAR

OF

HORTICULTURE AND FLORICULTURE,

FOR NOVEMBER.

FRUIT DEPARTMENT.

Fruit Trees may yet be transplanted successfully—if this work is well done, the trees will flourish as well the ensuing season as if it was performed in the spring.

Grape Vines in the open air should be pruned of their superfluous wood, but not cut to their final shortness. Vines in the green-house or graperies will now be dropping their leaves; these should be picked up every day and carried out of the house. Towards the latter part of the month they may be pruned to their proper length.

Strawberry beds should be protected with a light covering of straw or leaves, if the plants have not acquired strength.

Fruit trees, of all kinds, should now be guarded against the aggress of the grubs of the canker worm.

Peach trees, budded, in pots, should be removed to the cellar in severe weather.

Raspberry plants, upon the approach of cold weather, should be laid down and covered with coarse manure or leaves.

FLOWER DEPARTMENT.

Chrysanthemums, in pots, will now require an abundance of water, as they will be expanding their flower buds.

Dahlia roots: these should be taken up this month, and laid away in a dry cellar, out of the danger of all frost.

Hyacinths, narcissuses, &c.: finish planting all sorts by the 15th of the month, if possible: after this time they are weakened by remaining out of the ground.

Ten-week stocks, raised in September, must now be sheltered in frames: give air every fine day.

Auriculas: protect these in frames, and give very little water during the cold weather.

Mignonette plants must receive attention, and have plenty of air.

Gladioluses, ixias, sparaxis and other cape bulbs, should be planted this month.

China roses: repot them where it has not yet been done.

Annual seeds: finish sowing all the kinds this month.

Carnation layers: protect these in a frame, by planting them in pots, or setting them close together in the soil, within the frame.

Cactuses: give these water very sparingly at this season, unless the plants are standing in the stove or hot-house.

Camellias should now receive liberal supplies of water, and if warm sunny weather ensues, a washing over the tops with a syringe, once or twice a week. Sow the seeds now.

Tree pæonies: let those plants in pots stand out until very severe weather, unless it is desired to have the flowers open early in the season; in this case they may be removed to the green-house.

*Oxalis*es, of the spring flowering kinds, should be planted this month.

THE
AMERICAN
GARDENER'S MAGAZINE.

DECEMBER, 1836.

ORIGINAL COMMUNICATIONS.

ART. I. *Some Remarks on the Oxalis, as worthy of General Cultivation, &c.* By JOHN LEWIS RUSSELL, A. M., Prof. of Bot. and Veg. Physiol. to the Mass. Hort. Soc.

Now is the season for some of the earlier autumnal oxalises to be in flower, and for others of the winter blooming species to be in an active state of preparation for adorning our parlor windows, and the front lights of our green-houses. Perhaps there can be no species of elegant cultivated plants which are so desirable, from their variety and exquisite beauty, than these general inhabitants of tropical and temperate climes. Very many of the most interesting, and, by far, the most beautiful, are natives of the Cape of Good Hope, and have been long introduced and known to collections of merit and of taste. But while for more general cultivation, the fragrant hyacinth, the gorgeous tulip, the pretty crocus and the pale nodding snow drop, have been selected, to serve as reminiscences of the charms of Flora, at a season when the apparent desolation of winter shuts from our sight the varied landscape of smiling green and of party-colored foliage—the lovely oxalis is scarcely permitted to lend its gentle aid, and, by the brightness of its corols, to assist in the dissipation of the gloom which the season brings to some too sensitive minds. Winter is pleasant indeed, and its peculiar charms impressive. It is something more; for there is a magnificence and grandeur in its operations. But the florist is well content to admire its peculiarities by themselves, and would fain excuse its too intruding presence into his own domains. He would prefer to see the sun sparkling on the deeply tinted sepals of the crimson and crystalline amaryllis, than glittering in transparent diamonds, in fa-

cettes beyond the lapidary's skill, in every frozen dew-drop under his feet. The minutest floret of a foreign clime, the mild eye of a single pansy, "freaked with jet," would afford a deeper thrill of pleasure, than a forest hung in pendant crystals of pellucid ice.

This admiration for the truly beautiful and delicate in nature insensibly produces a corresponding sensation on the heart, while at the same time it is nowise averse to a proper estimation of the grander and more majestic. One may thus admire the splendor of a thunder-storm, with all the sublime phenomena which accompany it, but he will be more and oftener delighted with the rich effulgence of a western sky, or the mild radiance of the silent and solitary evening star, the precursor of the other and myriad luminaries of heaven.

"Who loves a garden, loves a green-house too," says Cowper, who seems to have found, in nature, charms and truths which society nor the world did not afford. To this sentiment we may add, that the lover of the garden, in the lieu of the green-house, loves the humble substitute of a sunny window, in whose broad and clear panes, a few choice exotics may flourish and smile in the very face of the wintry storm without. To unite variety with beauty is his aim. Plants of humbler growth and of vivid colors are therefore most likely to be selected. The deep ever-green foliage and varied flowers of the favorite camellia are prominent in this parlor cultivation. Requiring, comparatively, but a small portion of light and sun, they may be made to give way, and modestly to retire from the front of the sashes, that the smaller and more sensitively affected individuals can enjoy the full benefits of their appropriate situation. Now one cannot conceive of a more beautiful and elegant group for a parlor window than such an union of a few fine camellias, blooming behind and overtopping a number of Cape oxalises, with, perhaps, a favorite hyacinth, a golden mimulus, or a delicate gilia, to heighten and complete the effect of such a combination of beauty, grace and value.

Most of the oxalises are bulbous rooted plants. Their cultivation is extremely simple. Some of those from the Cape of Good Hope are autumnal, though most, winter blooming species. Of the former, *Oxalis rubella*, with beautiful rose-colored flowers and long prostrate stems, and another commonly known as *O. pentaphylla*, though we think only a variety of *O. rubella*, with lilac or pale purple flowers, and of the same habit, may be recommended for elegance and beauty. The *Oxalis pentaphylla* of Sims, having quite distinct characters, leads us to suppose that this individual kind is either a variety or else a misnomer. Of the smaller winter flowerers, we know none so unique and pretty as *O. versicolor*, scarcely four inches in height, and abundant in

flowers. The under surface of its petals being crimson, and the inner pure white, a most elegant appearance, unlike that of any other species, occurs when unexpanded; the usual curvature of each petal presenting a line of pure white, in contrast with the fine exterior.

For a constant bloom, during several months, none affords such beauty as the *O. rosacea*, whose very large rosy flowers are deeply embosomed in its dark-green and ciliated foliage; and yet more conspicuous for an elongated peduncle, is *O. Bowiei*, also with rosy flowers, but in three's and five's, instead of only one. There is certainly no species which has attracted our attention and admiration like this. Its peduncle is quite long—and, literally crowded with these noble flowers, it presents a very fine appearance. A beautiful yellow or pale sulphur-colored species we have, in *O. cernua*, usually and erroneously called, in this vicinity, *O. caprina*. The flowers of this species are not very large, but numerous, and supported in a graceful manner on a long and somewhat pendant peduncle. A curious garden variety is often seen, which is double; but beauty is here evidently sacrificed for singularity. For a continual, it may almost be added, *perpetual* flowerer (at least as perpetual as, and more so than, some roses, which bear that trivial and distinctive name), may be mentioned the tuberous rooted *Oxalis multiflora*, which we have had in constant bloom for five months past, and at this moment is covered with its dark rose-colored corols, and an exuberance of young buds.

Some of these pretty plants are singular for foliage. The pinnæ-like leaflets of *O. flabellifolia* has suggested its trivial name, resembling a folded and expanded fan. This is a brief flowering species, with yellow blossoms. Many are downy, as the *O. lanata*.

Several North American species are interesting, both from their intrinsic beauty and manner of growth. In deep, rich, moist and shady situations, especially in the western states, we find a pretty bulbous species with violet flowers, *O. violacea*. In the fissures of the decayed trunks of our prostrate forest trees, penetrating with their small and beaded roots, and delighting in the deep and cool shade, we find the pretty *O. Acetosella*, having large white flowers delicately striped with red. Both these little gems of our native forests will flourish when transported into our gardens, if allowed shady and retired situations. We have had them thriving without any extra care for several successive years.

Of the genuine *Oxalidæ* are two remarkable exceptions in the genera *Biophytum* and *Averrhoa*. The leaves of the former are irritable, collapsing on the touch. The latter, of which there are two species, differs in being arborescent. *A. Bilimbi* is the cucumber tree of Goa, and cultivated in many parts of the East

Indies on account of its fruit, which resembles a small cucumber, of intense acidity, and cannot be eaten raw, but is prepared as a conserve. The flowers of *A. Carambôla* are of a violet purple; the fruit is pale yellow, and of the size of a goose's egg, agreeably acid. This last mentioned species is equally sensitive as is *Biophytum sensitivum* Dec.

The oxalides are peculiarly acid plants. From *O. Acetosella* was formerly extracted that valuable article, oxalic acid; until Scheele discovered that sugar, acted upon by nitric acid, afforded a much more economical process.

Botanists have greatly differed, respecting the group or natural order under which the oxalides occur. Thus Lindley and De Candolle place them by themselves as *Oxalideæ*, though the latter hints that they have an alliance with *Zygophylleæ*. Adopting the opinion of M. Auguste de St. Hilaire, A. Richard unites into one family the *Oxalideæ*, *Tropæoleæ*, *Linacææ*, and *Geraniacææ* of De Candolle, and his own *Balsamincææ*, under the title of *Geraniacææ*, of the first named author.

A word on the method of growing them. Success depends on the proper soil, abundance of light, sun, and moisture. A large proportion of sand, not too fine, with leaf-mould, will make a light and rich compost, through which the water will permeate freely. Supply them with abundance of moisture when in a growing state, and on the dessication of the foliage, in the spring, remove the bulbs from the pots, and keep them dry until the next autumn. The flowers expand in the bright sun, but in a dull day they may be artificially opened, by placing the pots in a warm situation before the fire, taking due care that the heat be not too great. It is said that the petals of the crocus will thus expand in the bright light of a lamp; but for several successive times the oxalis will thus expand its flowers and close them again, even in the evening, as it is placed near to, or removed from, the influence of a constant and uniform warmth.

ART II. *Culture of the Pie Plant, or Rhubarb (Rheum ponticum)*. By EDWARD SAYERS. Newark, New Jersey.

THE pie rhubarb is one of the best known substitutes for green gooseberry tarts, in the early part of the spring, and by

many persons is greatly preferred in wholesomeness and flavor. This excellent vegetable has been much cultivated in the vicinities of large cities, in most countries, where it has always found a steady and ready demand, as a market vegetable, and in private gardens it is always the first consideration.

Culture and management.—The rhubarb is of easy culture, and very hardy, which renders it peculiarly adapted to this climate. It may be propagated either by seed or cuttings. The seed may be sown early in the spring, on a west border, in drills, eighteen inches apart, and managed in the usual way of culture: the plants will be of a sufficient size to remove into a stationary bed, in the month of October, which is the best time for planting rhubarb. The method I have generally followed, and found to answer best, in making new plantations, is, by dividing the old roots or crowns, in such a manner that each set has one or more eyes. These *sets* I plant in nursery rows, two feet apart, and one foot from each other in the rows, in the spring, and remove them into their stationary bed in the fall.

Preparing and planting.—The ground intended should be well prepared by manuring and trenching, as the rhubarb requires deep rich soil; this done, the bed may be divided into rows four feet apart each way, and at the angles the soil may be taken out to the depth of eighteen inches, into which may be planted one large root entire, which is to be covered with at least half of a wheelbarrow of well rotted manure, when the surface may be levelled. The after management of rhubarb requires good culture, as manuring, keeping clean, &c. If the plants are slightly protected, in the fall, with a quantity of manure, they will be benefited, and will come forward earlier in the spring; the manure will also strengthen their roots.

The routine planting of the rhubarb should be every three years, as young plants always produce the most tender stalks or canes. The method I have adopted, is, to take up one third of my bed every year, by which I always keep up a good succession of young plants.

Yours,

EDWARD SAYERS.

Newark, N. J., 1836.

ART. III. *Programme of a Prize of one thousand Francs, offered by the Royal Horticultural Society of Paris, with the view of obtaining, by means of a repetition of the Experiments of Van Mons, and also by any other Method pursued with Seeds, the Improvement of the varieties of Apples and Pears.* Translated by A. J. D.

OUR worthy colleague, M. Poiteau, with his usual talent, has developed the theory of Professor Van Mons, on the amelioration of fruits; particularly apples and pears. According to this learned Belgian pomologist, we are not to endeavor to obtain new varieties by means of the graft, that method only serving to propagate the qualities already acquired. Such is the universal opinion upon this point; every one is also agreed that the creation of new varieties can only take place by means of the seed. We have likewise thought, until this time, that success would follow with greater certainty, if the seeds planted were gathered directly from the most improved varieties.

According to M. Van Mons, on the contrary, by sowing seeds of fruits already in an ameliorated state, we can only obtain wild or nearly wild varieties, which, however, after successive generations, will produce fruits progressively ameliorated. It is therefore by sowing the seeds of fruits, which have in this way returned to their original or primitive state, that we shall begin to discover some improvement which will be more increased and decided in proportion to the number of generations: which follows necessarily, as the first sowings produce only wild or indifferent fruit. The seeds of these last produce trees, the fruit of which show symptoms of improvement—the next generation give still more ameliorated fruit, and so on continually.

It follows, therefore, that the horticulturist, according to M. Van Mons' theory, ought not to expect to obtain at once an excellent new variety. Nature demands a longer period: her grand principles are patience and time.

Following M. Van Mons' practice, the trees of the first sowing must be cultivated with care, and those especially, "which exhibit a handsome form, a smooth and shining bark, branches regularly distributed and proportioned to the size of the tree, young wood striate, a little twisted, breaking short without splinters, the wood large and short, thorns long, shoots furnished with plump well formed buds throughout their whole length, buds reddish or grey, lying close and not diverging, leaves smooth, borne upon footstalks rather long, the young ones remaining erect like the shoots for a long time, the lower ones hanging down and somewhat hollowed in their outlines."

When this first generation produces its first crop, we should gather the fruit *before* it is quite ripe, and allow it to mature in the fruit-room. The seeds contained must be sown to produce another race, to be treated like the last, and this successive reproduction must be continued during five, six, and seven generations. After that period has elapsed, we may confidently hope to obtain new and delicious fruits which may then be preserved by means of grafts, and may be still farther improved by successive sowings.

Such succinctly is the theory of M. Van Mons: a protracted method, as it demands the care and attention of the culturist during thirty-five or forty years. But the society will not undertake to pronounce an opinion upon its merits, especially after so many successful results in the hands of its originator, without having made experiments upon it. Reasoning from analogy, we would be disposed to believe that the seeds of fruits *already* ameliorated, ought to produce, in a short time, and with more certainty, varieties of superior quality to those we now possess. But as the society is aware that the operations of nature are often contrary to what appears in conformity with our reason, and as there has been generally remarked a rapid and lamentable decay, or at least deterioration of some varieties of fruit, formerly more celebrated, it appeals to the zeal and intelligence of horticulturists, and urges them to undertake the experiments pointed out by M. Van Mons, and, also, to carry on experiments with the seeds of pears and apples, anciently ameliorated. The Society especially desires that experimentors should give their attention to those varieties, the fruit of which comes to maturity latest in the season.

The society flatters itself, that among the numerous practical horticulturists, fortunately numbered in its members, an interest will be excited to make a series of comparative experiments; which will present results equally attracting and instructive. It is desirable;

That there be a diversity in the methods of sowing the seed, and subsequent culture;

That the experimentors should be prepared to verify all the facts and observations elicited in the course of these experiments;

That they should submit the varieties resulting from their experiments to the influence of different kinds of grafting, and endeavor to ascertain the best stock for grafting upon;

And that they make a full statement of their methods and the results to the society.

To forward these desirable objects the society offers a prize of 1000 francs, to be awarded in 1847, to any one of the competitors who shall present the best fruits, either of pears or apples, obtained from *seed*, which shall be found to be new and distinct varieties hitherto unknown; the whole to be accompanied

with a *memoire* and the necessary proofs and authentications, containing details of the culture bestowed upon the trees, the origin of the seeds taken from wild stocks or improved varieties, stating distinctly the result of every variety; the various accidents experienced during their growth; the methods employed to force the seedlings to a speedy production of fruit—such as annular or semi-annular incisions, twisting the branches, grafting of all kinds, or any other means already known, or of their invention: and, finally, the number of generations that have served to ameliorate the fruit, and the nature of the soil upon which the trees have been cultivated. These documents and specimens of the fruits must be forwarded to the society free of expense, in the course of the year 1846. The competitors must inform the society of their intention to compete for the prize, at the latest, on the 1st of June, 1846, in order that the trees and fruits may be acknowledged before the end of the same year.

The specimens of fruit should be accompanied with branches suitable for grafts of each, submitted to the examination of the society, in order that they may receive a place in their collections.

RENDU, *Reporter.*

Note by the translator.—We have placed the above article before the readers of this Magazine, both as a specimen of the zeal which actuates foreign horticultural societies, and as exhibiting to readers, not already familiar with the subject, a condensed view of the theory, for the production of new fruits, of the justly celebrated Professor, Van Mons, of Belgium. To the successful practical results of this theory, numbers, as well as ourselves, in this country, who are in possession of the delicious new pears originated by him, can bear testimony to the indefatigable perseverance of M. Van Mons, now in a venerable old age, during the whole of his lifetime, for a great number of most excellent and valuable fruits. But we will take it upon us to say, that, in the United States, where, perhaps, more than in any other country, fruit trees are propagated indiscriminately from the seed—no little surprise will be excited in the minds of those who become acquainted with this theory, at its tediousness, and the great length of time necessary to arrive at the desired results. Is it not true that here a preference is always shown, in raising seedlings, for seeds gathered from the finest *grafted* varieties? And is it not equally true, that, among seedlings reared in this manner (with of course a great many inferior fruits), there have been originated *directly* a great many fine and superior varieties? The Seckel pear, it is believed, sprang from a seed of the old Roussellette: the Washington, and many fine varieties of the gage plums, have probably been reared at once from seeds gathered from grafted trees. It is possible, and even

probable, that this may be accounted for, by supposing that Professor Van Mons' seedlings, from grafted varieties, were nearly all the product of seeds taken from *aged* trees, whilst ours have in almost every instance been gathered from young and thrifty stocks. However this may be, the continued and indiscriminate reproduction of fruit-trees in this country, from seed, offers some new facts in pomology and vegetable physiology, which we hope at some future time to develop. Whole orchards of apples may now be found in our newly settled Western states, of excellent quality, which were reproduced, in many instances, direct from the seeds of the best ancient grafted kinds. It is a subject worthy of investigation by the zealous horticulturists of Boston, whether the choice varieties of pears, lately originated there, viz., the Dix, Andrews, Heathcot, &c., are not the product of seeds gathered from grafted trees, or if they are the result of a gradual, though unperceived, amelioration.

Assuming Professor Van Mons to be strictly correct, we would suggest that a great saving of time and a considerable improvement in quality and vigor, might be gained by calling in *cross fertilization* to the aid of the cultivator, as soon as the fruit of the trees (say the second generation) begins to show symptoms of amelioration. By impregnating them with the pollen of the finest varieties, we conceive that the next generation would produce excellent fruit, and at a saving of twenty or thirty years. Mr. Knight, it is well known, was highly successful in obtaining five new varieties of several kinds of fruit, by this process alone; and we confess we should regret to see its peculiar merits and value forgotten, or laid aside, for so lengthily a practice, however excellent, as that of Professor Van Mons. Yours,

A. J. D.

Botanic Garden and Nurseries, Newburgh, N. Y., Nov. 12.

We commend the above article, from the *Annales of the Paris Horticultural Society*, together with the remarks by the translator, to the especial notice of our readers. At the present moment, when so much attention is being directed to the production of new fruits, we deem it of considerable importance. The theory of Professor Van Mons, and the great success which he has experienced in the production of new pears, as well as other fruits, has now become generally known, and many of the fruits already cultivated to some extent in our gardens. Whether, however, his method, which requires patience and unremitting attention during a long period of years, is that which is superior to all others, remains yet to be ascertained. We agree with the remarks of our excellent correspondent, that we should regret to see the merits, which, it has been repeatedly proved, result from cross fertilization, thrown aside or entirely neglected. The results of Mr. Knight's experiments we have elsewhere stated, and we have no doubt future practice will verify the importance of his system.—*Conds.*

REVIEWS.

ART. I. *Journal of the Essex County Natural History Society.*
Vol. I. No. I. Pamphlet, Svo. pp. 44. Salem. 1836.

THIS is the first number of a journal issued by the Essex County Natural History Society, and which will probably be continued from time to time, as the quantity of matter accumulates. The labors of this society are second only to those of the Natural History Society of Boston; and we look forward with pleasure to its future prospects: composed as it is of members who are greatly devoted to the different branches, we may anticipate the beneficial influence which it will exert in diffusing a taste for its numerous and varied objects. The society has a very rich collection, and their cabinets are filled with many rare specimens, the donations of the members and their friends; they have also frequent exhibitions of flowers at their hall, which has been the means of extending a taste for, and an interest in, the cultivation of plants.

The second anniversary of the society took place on the 15th of June last: on this occasion an address was delivered before the members, by Professor Russell. We had the pleasure of hearing it ourselves, and we need only say it was worthy the occasion and the subject of which it spoke; we regret that it was not listened to by a more numerous audience. It commences with a brief view of the progress of the society since its first organization, up to the present time: with not a specimen of any kind or a single work on natural science, the society, in the brief space of three years, has arrived to its now flourishing state.

The pleasure to be derived from the pursuit of Natural History is portrayed with a true hand, and its importance as a branch of education is distinctly urged. We have not room for many extracts, but we present the following, as showing at once the object for which the society was instituted:—

“The primary design of a society like ours is the intention to direct the mind of every lover of science and truth to a study of those glorious objects of Creation, which are every where around and about him. How many are those, whose wayward and idle curiosity is unduly awakened to the merest insignificance of misspent human industry, and totally blind to the unsurpassed, unrivalled workmanship of Nature’s plastic hand. How many, too, with listless and indifferent eye, can pass over and heedlessly tread down the gorgeous flower of their native fields—and yet gaze with pretended admiration at some frail production of a more distant clime! What curiosity is awakened at the meanest shell, or the smallest fragment of animated nature from distant countries, while far more curious and wonderful objects are cast up by every

returning wave on the neighboring sea-coast, or may be gathered on the smooth and pebbly margin of many a broad and extended lake, or the sedgy border of some crystal pond! What inestimable value does a shapeless and rude fragment of some utensil of semi-barbarous nations, a handful of dust from the site of some overthrown and almost forgotten city, the most useless and veriest insignificant substance of ancient art and of ancient pride possess, while the never changing, imperishable, ever eloquent, constantly useful, and always instructive types and originals of Creation's first Existence are overlooked and despised! These tell of the majesty and excellence, the deep, thrilling, instructive voice of Nature, to the reflecting and thinking mind; those—that individuals of our own species once lived—and died—and passed away into comparative oblivion. These unfold to us leaf after leaf, of those constantly instructive pages, which are written on the heavens and engraven on the earth,—while those only assure us, that the same operations of the natural world are every where the same in mode and effect. These exhibit to our admiring eye, the inimitable perfection of Creative Power,—and those only the extent of human industry and skill."

We congratulate the society upon their having been so fortunate as to avail themselves of the services of Mr. Russell. It is at once a manifestation of their admiration of his talents, which, we are happy to have the opportunity to say, are of no ordinary character. It would give us the utmost pleasure to see him placed in some good and lucrative professorship, connected with some of our institutions, where his valuable services would be better known and appreciated. Indeed, we are fully persuaded that no one could be found who would be more devoted to his profession, or fill such a place with so much satisfaction to the institution to which he might be attached.

ART. II. *An Address delivered before the Massachusetts Horticultural Society, at their Eighth Anniversary, September 17th, 1836.* By EZRA WESTON, JR. Pamphlet, 8vo. pp. 40. Boston. 1836.

THE address of Mr. Weston, though very brief, is full of interest to the horticulturist. It is in substance an account of the theory of Dr. Van Mons, of Belgium, in producing new varieties of fruits from seed; and Mr. Weston, though not, we believe, either a practical or physiological horticulturist, has succeeded well in offering to the notice of the society some of the most

valuable points on which the success of Dr. Van Mons is founded. In the prefatory remarks on the "services and theory" of Dr. Van Mons, Mr. Weston informs us that "the celebrated Mr. Knight, of very extensive experience in the propagation of fruit trees, attempted, though, as we may believe, on a very limited scale, to produce new varieties of the pear, by introducing the pollen of one variety into the prepared blossom of another, and raising trees from the seeds of the fruit thus obtained. But the method is complicated, and he never appears to have carried the experiment to much length—and it is also a method somewhat uncertain." We merely notice this paragraph to correct the statement in the latter part of it, which, if generally believed, we fear would tend to do away with what we consider, and have proved to be, an important process in the amelioration of fruits, viz., the cross fertilization of varieties. Mr. Weston remarks that this system is "complicated:" on the contrary, it is a most simple mode. Indeed so common has it become, that new varieties of flowers are produced by the veriest novice in floriculture. He also remarks that Mr. Knight did not carry the experiment to much length—and that "it is also a method somewhat uncertain." We are convinced, that if Mr. Weston had been somewhat more acquainted with the subject, he would not have given utterance to such an opinion: and for this reason we have no fault to find with him. Mr. Knight did, however, pursue the experiment to a considerable length, and produced many superior sorts of new pears, apples, cherries, peaches, plums, grapes, strawberries, &c.; witness the Downton, Lowell, and other pears, the Downton pippin, the Elton, Black Eagle, and other cherries, the Acton Scott, and Spring Grove peaches, the Downton Imperatrice and other plums, the variegated Chas-selas grape, the Downton, and Elton strawberries, &c. Without detracting in the least from the success of Dr. Van Mons, Mr. Knight has not been less so. We hope when we shall have become better acquainted with the theory of Dr. Van Mons, which is fully detailed in his *Pomonomie Belge*, two volumes of which are already published, to give our readers more information relative to his new mode. Till then we prefer to say but little in regard to it. We know he has raised an immense number of new kinds: but we are not prepared to say, that he would not have been equally, if not more, successful, in his experiments, by calling in the aid of cross fertilization, than he has been in not doing so.

MISCELLANEOUS INTELLIGENCE.

ART. I. *General Notice.*

Marie Louise and Napoleon Pears.—The great confusion that has arisen respecting these two pears, was on account of many of the Continentalists mistaking the pear raised by Dr. Van Mons, called the Emperor of France, for the Napoleon, and the pear raised also by him, called the Imperatrice de France, for the Marie Louise. We believe now that Mr. Manning, with true praiseworthy zeal, has set this matter to right, and is assured of the identity of the two sorts. We recommend those of our friends who are in want of trees of either of these two valuable fruits, to apply to Mr. Manning, of Salem, where both are to be found. In our next volume information respecting all the new pears worthy of cultivation, will be produced: in saying thus much, our readers will be happy to learn that we shall be aided by Mr. Manning of Salem, and Messrs. C. and A. J. Downing of Newburgh, N. Y., three the best pomologists our country affords.—*Conds.*

ART. II. *Foreign Notice.*

Cow Cabbage.—This vegetable, which agitated the whole agricultural community about three or four years ago, since which time we have not heard much respecting it, seems to have lately attracted considerable attention in England, where the seeds have been selling at the enormous price of about *five dollars* for a package of *twenty* seeds. In a late number of Loudon's Magazine, we find a notice of the same: and as a specimen of consummate puffery, we are induced to offer part of it to the notice of our readers:—"Patronised by His Majesty. Wonderful production of nature! Waterloo Cæsarean evergreen cow cabbage, of recent discovery, unequalled in affording the most interesting and desirable results to the farmer, grazier, and manufacturer. This singular and extraordinary species of cabbage, almost unknown in England till introduced by the persevering efforts of Mr. Fullard, three years since, grows from nine to twelve feet high, and from fifteen to twenty feet in circumference. Five of these stupendous cabbages, now raised to the greatest perfection in equality as well as size, have been repeatedly found, by proper management, an ample allowance of food for one hundred sheep, or ten cows per day; and the nutrition thence supplied by this delicious vegetable will (as experience has already abundantly demonstrated) speedily produce the most surprising improvement in the *growth* and *utility* of every description of cattle. As an evidence of the beneficial tendency of this cabbage, Mr. F. has the great pleasure and satisfaction of saying, that sheep fed upon it have

been found to produce wool of the finest silken texture, twenty-five inches long; a circumstance which cannot fail immediately to claim the utmost attention and admiration: as such, the cultivator of these cabbages will not only realize pecuniary profit beyond any previous experience, but the manufacturer will also obtain a material superior to any heretofore produced by the most profitable speculation, the general and extensive demand for which must exceed all present calculation. The commerce of the country, as well as the interest and pleasure of the community at large, will likewise be greatly, if not incalculably, enhanced by the cultivation and use of this improved vegetable production. This Waterloo Cæsarean cow cabbage has been pronounced by the father of the agriculturists, whom, from his well known experience, we are all bound to believe, to be the greatest wonder that ever appeared in the vegetable kingdom. It was shown to that very highly esteemed and truly respectable gentleman, T. W. Coke, Esq., Holkham Hall, Norfolk, in October last, when he immediately said—‘*Mr. Fullard, you told me, three years ago, agriculturists were only half way advanced in improvement: this cabbage makes me say I am bound to believe you. I do say it is the greatest wonder the earth ever produced.*’ Mr. Coke subsequently introduced several *dukes* and other *noblemen*, to the number of nine, to view this great production, all of whom expressed their astonishment, and engaged a part of the seed for use this year (1836).”

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“*Further Particulars.*—In reference to the length of the wool produced by sheep fed upon the new colossal vegetable, as described in this prospectus, the proprietor, Mr. Fullard, to prove the fact, has now a lamb-hog, one year old, to be *seen* at Mr. —, No. —, —, where T. W. Coke, Esq. of Holkham Hall, paid a visit on Tuesday, the 14th instant; and, upon due examination of the said lamb-hog, he declared, in the presence of many witnesses, that he never before saw such a specimen of wool for *length* and *fine* quality. Mr. F. has already been awarded *nine* premiums, by the Agricultural Societies, for the *superiority* of his sheep and other cattle.

“(Signed) —, No. —.”

The Conductor remarks that “the noise made by Cobbett’s Locust was nothing to this.” While the London seedsmen are selling this seed for one shilling the ounce, containing five thousand seeds, the retailer (a wholesale perfumer), takes daily thirty or forty sovereigns, (\$150 to \$200). We have received a few seeds ourselves, and we believe several gentlemen in this vicinity have also: but the true merits of the cabbage are already known: they will grow to the height of six or seven feet, and are a coarse vegetable, suited for cattle, but possessing none of the qualities stated in the advertisement. We hope none of our agriculturists have marvellousness so largely developed as to be persuaded to believe in its remarkable merits, as set forth in the above puff, and enter into its cultivation.—*Conds.*

ART. III. Domestic Notices.

Premature flowering of several Azaleas and Rhododendrons.—In the collection of Mr. Wilder at Hawthorn Grove, *Azalea ledifolia* and *indica* var. *purpurea pleno* have been in bloom for upwards of a month; the former having expanded nearly all the buds upon the plant; the latter

has also opened several buds: *Rhododéndron arbòreum* var. *hybridum*, is, also, now (October 18th), expanding an umbel of its magnificent flowers. Mr. Wilder cannot account for this very unusual display of flowers at this season of the year. We can only attribute it to some situation in which they were placed during the summer; as we have an azalea, the duplicate of which we let Mr. Wilder have last spring; that plant with him has flowered, while ours shows not the least disposition to do so earlier than usual.—*Conds.*

Cercus grandiflorus.—Since we wrote the paragraph at page 390, respecting the flowering of this splendid plant at an unusual time, we have been informed by J. W. Boot, Esq. of this city, that the same variation was observable a year since, on a plant in his collection. Two or three flowers opened in the morning, and remained expanded nearly all day. Such singular variations in the time of flowering of this species we deem highly worthy of record.—*Ib.*

Oxalis Bowièi.—This very beautiful and showy species is now in fine bloom at our garden. We consider it one of the handsomest of the whole genera. Its habit of growth is similar to the *O. cernua*, a spring flowering species; but the flowers are larger, and of a deep crimson color. This, together with the *O. hirta*, should be in every collection of autumnal flowering ones: at this season of the year, when there is scarcely a flower to enliven the in-door collection, these continue to greet the spectator with a charming display of blossoms.—*Ib.*

Morus multicaulis.—This mulberry, it is now well ascertained, is a hybrid variety, and not a true species: the seeds will not produce its like. We have been informed by a gentleman who purchased a plant, three or four years since, of some of the nurserymen in our vicinity, that with considerable care he raised quite a large number of seeds. The plant was taken up upon the approach of severe weather, and placed in a cellar where the frost did not penetrate: the roots were slightly covered with earth. Pursuing this course two succeeding winters, it attained the size of a large shrub with numerous ramifying branches: the third season it produced fruit and seeds. No other species or variety of mulberry grew in the vicinity of this plant, and the blossoms consequently could not have been fertilized but by its own pollen. These seeds were carefully sown, and the result was a number of seedling plants, with foliage of all sizes and textures, from that of the common white to that of the parent. No better proof is needed to confirm what we now state, and have before stated.—*Ib.*

Pæonia Moultan.—Is there such a species of the pæony as the *P. Moultan*? Loudon, in his *Hortus Británnicus*, enumerates one under this name. But Mr. Sabine states, in the *Horticultural Transactions*, that the *P. Moultan* papaveracea is the original species, and the others varieties: with this account you agree in your paper on the subject in a late number. As I infer, the name *Moultan* is given only to designate the ligneous character of the species, which should be applied to every species or variety, as in your article, although differing from Mr. Sabine. The object of stating this is to correct an error of some amateurs, who have an impression that the *P. Moultan* is a distinct species, and different from the *P. Moultan* papaveracea var. *Banksiæ*.—*An Amateur*, November 11th, 1836.

Prolific Lima Bean.—What are the merits of this bean, which, it has been stated, place it on an equality with the true Lima? I should be glad to learn, from some of your readers.—*Ib.*

ART. IV. *Massachusetts Horticultural Society.*

Saturday, October 29th, 1836.—Exhibited. From Messrs. C. & A. J. Downing, Botanic Garden and Nursery, Newburgh, N. Y., by Mr. Manning, Bezi de la Motte, Sylvange, St. Germain, Gilogil, brown beurré, St. Michaels, and Mabilie (?) pears; the St. Michaels, brown beurrés, and St. Germain, were as fine as any we have ever seen. The Mabilie is not the same as that mentioned in the London Horticultural Society's *Catalogue*, which is there stated to be a kitchen fruit: the specimen was tasted at a later meeting, when mature, and found to be one of the best, if not *the* very best pear that has been exhibited at the society's room. By the kindness of the Messrs. Downing, we received a fine specimen, which we tasted, and noted down its qualities: these we will give at a future time; it is evidently a valuable variety. Our readers may anticipate some further information respecting it from the Messrs. Downing; also, Jonathan and Dominic apples, both fine fruits. From E. Vose, Esq., Urbaniste pears, and a variety unknown. From R. Manning, belle et bonne, beurré Von Marum, and green pear of Vair; also, violette Imperatrice plums. From the Hon. John Lowell, Sylvange Verte, Bezi Vaet, delices d'Hardenpont, beurré Crapaud, beurré bronze, Calebasse d'Holland and a kind received of Mr. Knight, supposed the Elton. Mr. Lowell states in a letter to the committee on fruits, that "no fair opinion can be formed of them [the specimens] this season, as my ground has been as dry as ashes at the depth of two feet, as I found by trenching." Mr. Lowell in a note recommends the beurré Knox, "as the best baking and stewing pear" he knows: it is a great and constant bearer, and of "noble size, juicy, and sweet." From Dr. E. Dwight, Dedham, Thin skin apples, so called from the thinness of the skin; it is stated to be an abundant bearer. From Gorham Parsons, Esq., Bellflower and De neige apples.

November 5th.—Exhibited. From B. V. French, Wilkinson pears. From R. Manning, Wilkinson, and Pope's Quaker pears; also Rambo apples. From L. P. Grosvenor, St. Michael and bell pears; the former very handsome. From J. Morton, apples, the name uncertain, but supposed the Harvey. From T. Brown, pears, the name unknown.

November 12th, 1836.—Exhibited. From R. Manning, Doyenné gris, Capsheaf and Fulton pears; the specimens of the former very fine. From Joshua Hersey, South Hingham, apples, a native fruit, the name unknown.

ART. V. *Exhibitions of Horticultural and Floricultural Societies.*

IN making up these reports, we have included only those articles which are particularly worthy of note. We have, also, only given the dates of those meetings of the respective societies, where there has been any thing of importance shown. We hope by the return of an-

other season to be able to furnish accounts of the exhibition of *every* horticultural and floricultural society in the country. The present article will not be so complete as we had anticipated, in consequence of our not receiving any accounts from several societies, which have had their annual exhibition this fall. It requires considerable labor and attention to make them up properly, and unless we have returns in season, we cannot promise their appearance.

Columbian Horticultural Society, Washington.—August 8th, 1835. From June to this date. Fruits: From A. Lindsay, a seedling apple. From J. A. Smith, English codling apples. Red Juneating, summer red-streak and summer pearmain apples from R. Barnard. Vegetables: A drumhead cabbage weighing fourteen pounds six ounces, from J. O'Grady. Fruit of the purple egg-plant, weighing four pounds five ounces.

September 5th. Brown beurré and Seckel pears from J. A. Smith. Seckel and other pears were also exhibited. Vegetables: squashes, cabbages, sweet potatoes and other vegetables, by various members of the society; the fruit of the purple egg-plant was very large. One pumpkin weighed twenty-three and a half pounds.

October 3d.—Fruits: A. Lindsay exhibited, Catawba, Roman plum, Mississippi and white Chasselas grapes. Joshua Pierce, Catawba grapes. Specimens of several kinds of apples from various members. Vegetables: fruit of the purple egg-plant, weighing five pounds: turnip-beet, weighing four pounds: large margel wurtzel, cocoa-nut squash, &c., from H. F. Camp. Brocolis, potatoes, four varieties of radishes, sweet peppers, and turnips: also a pumpkin weighing forty pounds, cocoa-nut squash twenty-two pounds, and a Canadian squash twenty-two pounds, J. A. Smith. From J. Pierce, Scotch Kale, cabbages, very large, white and black radishes. Celery, one head three feet in length, weighing three pounds four ounces.

At the Fall Exhibition, November 7th, 1835, for delivering the prizes, awarded to the members, a great number of excellent specimens of vegetables were exhibited. The following we have condensed from the society's report:—

“This exhibition, the first autumnal one the society has had, though got up after a few days' notice, and consequently in great haste, was in a high degree gratifying, from the variety, beauty, and magnitude of the productions of the vegetable kingdom exhibited. The season had, indeed, been very favorable, but there was still an evident improvement in every product of the garden, since the establishment of the society. Among the cabbage tribe of various kinds, all large and fine, brought by Messrs. Douglas, Pierce, Smith, Cammack, Wilson, &c., was one from the garden of the first named, which weighed thirty-one and a quarter pounds, and one brought by Mr. J. A. Smith, which contained *four distinct heads*, well formed, and of considerable size. Some of the radishes were monsters, and the celery, cauliflowers, cardoons, turnips, beets, parsnips, pumpkins, &c. were very large and perfect. Among the latter was one raised by Mrs. Whitney, near Georgetown, which weighed ninety-nine pounds, and measured six feet in circumference. The beautiful floral pyramids, composed of chrysanthemums, interspersed with dahlias, roses, heartsease, &c., and formed by Mr. Douglas, decorated the table in front of the President's chair, and some fine exotics from the collections of Dr. Gunnell, Mr. Suter, Mr. Douglas, and others, and a number of beautiful garden flowers, ornamented one of the side tables. Among the former were the tea-plant in bloom, the phylica, and a specimen of the white camellia, with a splendid flower. There was also a considerable collection of fruit, chiefly from the orchards of Mr. Barnard and Mr. Smith.

"The President, General Towson, before distributing the premiums, delivered a neat and appropriate address on the occasion. The Reports of the Committee of Arrangements, descriptive of the former Exhibition, and of the several Standing Committees, were then read by Mr. Barnard (second Vice President), and Messrs. Gunnell and Smith. The premiums consisted of handsomely-wrought silver vases, cups, dishes, knives, medals, &c., executed to order, by Messrs. S. and V. Masi, Williams, &c., of Washington, and Mr. Villard, of Georgetown, and were presented, with appropriate remarks, to the persons to whom they had been previously awarded by the society. A silver cup of the value of ten dollars was presented to Mr. J. A. Smith, for the beautiful and excellent specimens of fruits and vegetables exhibited by him to the Council from time to time, and at the Annual Exhibitions of the society. Mr. Barnard declined receiving the premium awarded to him, and presented a silver cream-and-sugar ladle, of double the value, as a premium for the best two quarts of strawberries or raspberries which should be exhibited by market-gardeners at the next Annual Exhibition in 1836. After the premiums had been distributed, Dr. Jones, the lecturer on Horticultural Chemistry, of the society, made some interesting and appropriate remarks on the valuable properties of the liquid caoutchouc, a specimen of which he exhibited. Some delicious specimens of the pumpkin, prepared by a culinary process for the occasion, were presented by Mrs. Hall and Mr. Barnard and Mr. Smith, of which the company were invited to partake, and all seemed to admit that this vegetable, thus prepared, was as delightful to the palate as it was nutritious to the body. The whole Exhibition, which lasted about four hours, was, in no ordinary degree, gratifying and interesting, and furnished satisfactory evidence of the great and obvious improvements which had been made in the various products of the garden, by the operation of the society, in affording encouragement to those who devote their leisure or exertions to the salutary and useful pursuits of Horticulture." (*National Intelligencer*, Nov. 12, 1836.)

Mr. J. Pierce exhibited cabbages weighing twenty pounds. Mr. Hickey, savoys weighing eight pounds and three quarters, and long blood beets weighing ten pounds. Mr. Hoppe, cauliflowers weighing seven pounds. Mr. Ouseley, cabbages weighing eighteen and a half pounds. Col. Taylor, one weighing twenty pounds. Mr. Douglas, Jr. extra specimens of cabbages, the largest weighing thirty-one and a half pounds. Mr. Crimmins exhibited fine celery. Mrs. Whitney a large pumpkin weighing ninety-nine pounds. Mr. J. A. Smith exhibited fine cabbages, cauliflowers, green peas, celery, Valparaiso, and crook-neck squashes, and several kinds of turnips.

The prizes for the best fruits and vegetables exhibited between the first and second annual meetings, were awarded as follows:—Fruits: Mrs. Joseph Gales for various fruits. Mrs. Seaton for various fruits. Mrs. M. Smith for lemons. Miss Bingham for strawberries and cherries. Mr. J. Agg for apples. Mr. Cammack for gooseberries. R. S. Cox for various fruits. Robert Dick for various fruits. A. Lindsay for grapes. J. Ouseley for hauthois strawberries. Joshua Pierce for green-house fruits. W. Redien for various fruits. J. A. Smith for various and numerous specimens. A. Suter for best oranges.

Vegetables: To Dr. Bayne, for various articles. Jesse Brown, for best and earliest celery. H. F. Camp, for various articles. Wm. Cammack, for finest cucumbers, asparagus, brocoli, and early cabbages. M. Crimmins, for various frame productions and large celery. John Douglas, for the finest cabbages. Joseph Gales, T. Grimes, H. V. Grimes, and William Hickey, for various articles. E. Hoppe, for forced vegeta-

bles and mushrooms. William Ingle, and J. Maule, for potatoes. George Marbury, G. Naylor, Mrs. Seaton, and J. Wheat, for various productions. H. Naylor, best sweet potatoes. J. Ouseley, artichokes and fruit of the egg plant. J. O'Grady, drumhead cabbages. J. Pierce, savoys. J. A. Smith, for various articles. S. Whitall, onions. Mrs. Whitney, for a large pumpkin. William Yates, for large parsnips. Total amount of prizes for fruits and vegetables upwards of one hundred and fifty dollars.

February 6th, 1836.—From November to this date, few things were exhibited. Mr. E. Hoppe exhibited two bunches of asparagus, sea-kale heads and cardoons.

March 6th.—Fruits: Several varieties of apples. Vegetables: Asparagus, cucumbers and mushrooms, one measuring fifteen and a half, and another fourteen and three quarter inches in circumference, weighing one pound six ounces, from E. Hoppe. Cucumbers and lettuce from M. Crimmins. From H. F. Camp, lettuces and short-topped radishes.

April 2d.—Fruits: Varieties of apples in excellent preservation. Vegetables: From E. Hoppe, London early cucumbers, measuring twelve inches in length and six in circumference; fine mushrooms, four weighing nearly one and a half pounds, and ash-leaved kidney potatoes.

June 4th.—Since the last date, the only fruits exhibited were apples, and, on May 21st, specimens of strawberries. Vegetables: Of these, since April 2d, there was a very fine display: a bunch of asparagus of nine heads weighed eighteen ounces, fine mushrooms, royal cabbage lettuce, one head weighing nearly two pounds, and cauliflowers, were exhibited with radishes, cabbages, &c. Two heads of asparagus raised in the garden of Robert T. Brent, weighed half a pound, and one of them measured four and a half inches in circumference.

Annual Meeting, June 8th and 9th.—The Committee state that "the results of the Exhibition, so entirely satisfactory to the public as well as to the society, are sufficient evidence of the prosperous condition of this branch of their labors. The plants on the central pyramid, with those placed around the room, were from private collections, with the exception of a few from Linnæan Hill, from which an idea of the number of contributors can be formed; and had the season been as favorable even as last year, we should have had as much bloom on the large pyramid as on former occasions; but the geraniums had, generally, gone out of bloom, and although there were as many exhibited this year as last, the varieties could not be distinguished without a close examination. It is believed that upwards of forty varieties of China roses were exhibited, some of them of the very latest introduction into the country; others seedlings, raised in this place. The display of native flowers was good, but not equal to that of last year, which is also attributed to the unfavorable weather. There were many fine ferns, orchises, phloxes, &c., but we missed our delicate *monotropas* and *orobanches*."

The following are a few of the contributors of flowers:—Mrs. Bomford, several superb vases of beautiful green-house flowers, and many rare plants. From Mrs. Seaton, vases of beautiful flowers and several fine varieties of fine flowers. Mrs. Suter, Mrs. Pierce, and other ladies, also presented fine specimens of flowers. Mr. Samuel Feast and John Feast, of Baltimore, exhibited fine specimens of *Cereus splendidum*, and *speciosissimus*, *Amaryllis Johnsoni*, *Hoya carnosa*, *Strelitzia reginæ*, and many choice cut flowers. From Georgetown College, *Thëa viridis*, and *Cactus triangularis*. From Dr. A. Mc Williams, a large plant of *Strelitzia reginæ* in bloom, and *Cereus septangularis* (?) fifteen feet high.

From A. Suter, Esq. citron and lemon trees, *Cereus speciosus*, aloes, &c.; also, seedling roses, from a native wild species of extraordinary size. From Dr. J. S. Gunnell, yellow and white tea roses, and Websterii yellow Noisette, Harrison's yellow, and many others; rhododendrons, daphnes, *Pæonia Whittellii*, &c. From Richard S. Cox, Esq., *Caprifolium flexuosum*. Mr. Hyde, a huge hydrangea, measuring twelve feet in circumference.

Fruits: five or six kinds of strawberries were exhibited, among which we notice the melon, a very large variety; several dishes of Hautbois were also presented. May-duke, June-duke, white-heart, bleeding-heart, and black Tartarian cherries were exhibited by various members. Gooseberries and currants were also presented in variety. Immature fruits of apricots, plums, &c., were exhibited. Some fine lemons were shown from different gentlemen, of very large size.

Vegetables: fine specimens of the same kind were exhibited as has been enumerated; early York cabbages, weighing upwards of three pounds; cucumbers fourteen inches long; giant asparagus, and mushrooms, together with lettuces, radishes, &c.

Premiums for flowers were awarded to Mrs. Bomford, Mrs. Suter, Mrs. Naylor, Mrs. Seaton, Mrs. J. A. Smith, Mrs. Pierce, Mrs. Nichols, Mrs. Wiltberger, Mrs. Hickey, Mrs. Dodge, Mrs. Gunnell, Mrs. Rothwell, Miss Bingham, and Misses Seaton, Price, Johnston, Suter, Barnard, Meade, Watterston, Boyle, Peyton, McLeod and Poletti. The gardener at Georgetown college, and of Dr. A. B. Williams, each a premium. Total amount, \$101.

The award of the vegetable and fruit Committee is made at the fall exhibition in November. (*Report of the Col. Hort. Soc.*)

Pennsylvania Horticultural Society.—This Society held its annual exhibition in October. We regret, however, that we have received no official account of the same, to lay before our readers. We find the following in one of the Philadelphia papers:—

At the meeting in October, the premium for the best twelve varieties of dahlias was awarded to Mr. R. Buist. The premium for the best seedling dahlia was awarded to Mr. Peter Mackenzie. A premium of ten dollars was also awarded to J. B. Smith, Esq., for several plants of the Baobab, (*Adansonia digitata*), from two to three feet high, raised from seed. The germination of the Baobab, it is said, requires three or four years in its natural climate, the hottest parts of Africa. Mr. Smith, by placing the seeds in a hotbed, kept at the unusual temperature of 180° (Fahr.) obtained the plants in about ten days.

The premium for the best exhibitions of vegetables was awarded to Mr. Anthony Fellow.—(*Phil. paper.*)

We are sorry that Mr. Buist or Mr. Landreth, or others of our friends, did not send us an account of the exhibition, in season for this number.

Maryland Horticultural Society.—*Saturday, May 21st, 1836.* The accounts that we have of the meetings of this Society, we extract from the *Farmer and Gardener*.

Vegetables: From Mr. Peter Nantz, crookneck winter squashes, of the growth of 1835. These are stated to possess the excellent quality of keeping "perfectly fresh" for "any length of time desired." They are said to have been kept *four years*, and were as fresh as when taken from the vine. They only need to be hung up in a dry room, secure from frost. We hope that some of the growers of this fine vegetable will forward us a few seeds for distribution among our friends. From Mr. Thomas Dixon, lettuce and cauliflowers. James Stranch exhibited cauliflowers, one bunch of asparagus and lettuce. *Flowers:* *Amaryllis Johnsoni*, and flowers and bouquets from Mr. Zebulon Waters. From Mr. John Feast, thirty varieties of cut flowers. Mr. Samuel Feast fifteen varieties of new China roses, and seven of Scotch roses, and five

varieties of the pæony; also a plant of *Epiphyllum speciosum*, with upwards of one hundred expanded flowers, and *Cereus speciosissimus* in fine bloom, with various cut flowers.

Saturday, May 28th. *Flowers:* *Alstrœmèria Pelegrina*, *Calceolària pinnata*, and various bouquets of fine flowers. From Edmund Kurtz, *Cereus Ackermànii*, two specimens of South American amaryllises, and bouquets of cut flowers. From Samuel Feast, *Cereus Ackermànii*, eighty-four varieties of roses, and bouquets of flowers. From John Feast, several varieties of roses, and the double white rocket, with eleven flower stems to one root. *Vegetables:* Mr. James Straneh, early Kidney potatoes. From Thomas Dixon, half a peck of peas, and one cauliflower. From Edmund Keene, two fine bunches of asparagus.

August 20th.—We have no account from the last date to this. *Flowers:* From Samuel Feast, *Jambôsa*, vulgàris, and fine roses, including Kùrtzi, Queen of roses, &c. From Edmund Kurtz, eight varieties of *Zinnia elegans*. From Henry Moore, a fine double seedling althœa. From Robert Sinclair, dahlias, viz: Queen of the dahlias, Foster's Incomparable, Belladonna, Negro Boy, and Brewer's Paragon.

Fruits: From Mrs. Robert Taylor, fine blue plums. From Richard Valentine, pears, plums, and figs. From Henry Moore, Moore pears, so called, raised by him from seed. [We should be glad to learn the qualities of this pear.—*Conds.*] also, prime plums, Moore's ne plus ultra, Magdalen and Oseola plums, all seedlings of Mr. Moore's; but no qualities are stated: green gage and matchless plums.

August 27th.—*Flowers:* From Dr. Edmonson, Barrett's Susanna, and other dahlias, and the *Erythrina Crísti-gàlli*. From Robert Sinclair, numerous varieties of dahlias, viz.:—Alice Grey, Village Maid, Negro Boy, alba purpurata, British Queen, King of the yellows, Foster's Incomparable, Queen of dahlias, Brewer's Paragon, Chancellor, Queen of the whites, and Richardson's Alicia.

Fruits: From Mrs. B. I. Cohen, white egg plants and yellow plums, from a tree from Havre. From Mr. Henry Schroeder, fine tomatoes, some of them weighing one and a half pounds each. From Samuel Feast, seedling pears, from the Seckel, a very fine and delicious fruit, so pronounced by the Committee: [we should be extremely happy to hear from Mr. Feast, respecting this variety.—*Conds.*]

September 30th.—*Flowers:* From Mr. G. B. Smith, *Ròsa Herbermònti*, and a species of *Liàtris*, very beautiful. From Mr. Samuel Feast, dahlias, salvias, and *Heliánthus multiflorus plèno*. From Mr. H. Rodewald, bouquets of flowers, dahlias, and fine German asters.

Fruits: From Mrs. George H. Keerl, a dish of Prince's green gage [? Flushing gage] plums.

Vegetables: From Mr. Peter Coombs, one peck Lima beans, and cherry beans, both fine. From Thomas Dixon, fine tomatoes. From Mrs. M. F. Harold, New Jersey, fine tomatoes. From Mr. J. Straneh, half a peck of Lima beans, Mercer potatoes, and one dozen of gumbo.

The Annual Exhibition of the Society was held on Wednesday and Thursday, the 5th and 6th of October, and was crowded with "admir-ing spectators." "The display of fruits and flowers surpassed all expectation, and evinced most strongly how great and signal have been the advantages secured to this community, by the untiring zeal, enter-prize and intelligence of the members of that truly patriotic association, and how deep is the debt of gratitude which they have impressed upon their fellow citizens." (*Balt. Farmer and Gard.*)

New York Horticultural Society.—This society held its annual meet-ing on the 28th, 29th, and 30th of September, as noticed at page 391. We have, however, received no returns either official or unofficial: we had hoped to have been able to have given a complete account of every thing exhibited.

of the first quality. Sweet potatoes are very scarce; the early frosts in the vicinity of Philadelphia, from whence a greater portion of those sold in this market are received, has prevented the growth of the usual crop. Turnips are now more abundant. Of onions there is a good supply at fair rates. Beets and parsnips, though not as abundant as usual, are sufficiently so to supply the market. Radishes are scarce, and, from the lateness of the season, prices advanced. Cabbages, as we stated in our last, are scarce: few drumheads are to be had: early frosts prevented their full growth: red cabbages are also very scarce. Some beautiful cauliflowers have come to hand of good size for this season. Lettuces are not so plentiful, and prices higher. Of celery, the stock is small, and not so well grown as usual. Tomatoes are all out of the market. Squashes remain scarce, and prices have advanced a shade: all sorts do not keep well this season, from the cause of the vines having been destroyed by early frosts, and thus prematurely ripened. Pumpkins are tolerably plenty.

In fruits, with the exception of some kinds, there has been a reduction in prices. Apples are quite plentiful, and considerable quantities have been brought in since our last. Pears are also abundant: we have had some fine St. Germain's, raised in the city, and some of very fair quality from the vicinity; the former have been sold at our highest quotations: that old sort, the Messire Jean, commonly known as the Monsieur John, is very plentiful and of good size; other dessert sorts are all gone; pound and Iron pears for baking are abundant. Quinces since our last have come to hand in considerable quantity, and prices remain the same. Cranberries are yet scarce. Very few pine apples remain on hand. Of grapes there has never been a more plentiful supply: there has been numerous arrivals; our quotations are remarkably low, but they have sold in quantities far below these; we notice that the purple sort is not liked so well as the white; we believe, however, that they will be found equally as good. Berberries are very scarce, and nearly gone for the season. Oranges and lemons are held at advanced prices. Chestnuts and walnuts continue as in our last. *Yours, M. T., November 22d, 1836.*

ART. VII. Meteorological Notice.

FOR OCTOBER.

THE mean temperature of this month was 9° less than the same month last year. The severity of the frost in the previous month destroyed vegetation; during the whole of this there has been frequent light frosts, and one or two quite severe ones: very little rain fell. The course of the wind has been more equally divided than usual, but the prevailing ones have been from S. to W.

THERMOMETER.—Mean temperature, 41° 9'—highest, 70°; lowest, 17° above zero.

WINDS.—N. three days—N. E. five—E. one—S. six—S. W. six—W. six—N. W. four days.

Force of the Wind.—Brisk, nineteen days—light, twelve days.

Character of the Weather.—FINE, six days,—FAIR, eighteen days—CLOUDY, seven days.

Rainy, four days.

MONTHLY CALENDAR
OF
HORTICULTURE AND FLORICULTURE,
FOR DECEMBER.

FRUIT DEPARTMENT.

Strawberry beds: continue to protect newly planted ones with a slight covering of leaves, straw, or coarse manure, where not done before. Old beds will come forward earlier in the spring with a little protection.

Fruit trees that have been planted this fall, it will be well to protect at the roots with a wheelbarrow of manure, to prevent freezing and thawing of the soil in the spring.

Grape vines in the open air should be trimmed of superfluous branches and terminal shoots, and tender kinds protected by a covering of leaves or manure. Those in the green-house or grapery, where not done before, should be pruned the latter part of the month, and the shoots carefully bent down horizontally with the front sill of the house, and tied loosely together. Young plants that have been grown in pots, should be put in the cellar.

Scions for grafting may be cut at this season, and preserved in the cellar, by placing the lower ends in a box of earth.

FLOWER DEPARTMENT.

Hyacinths, tulips, crown imperials, narcissus, crocuses, &c., should be got into the ground as soon as possible this month, if neglected or put off from the last: after this period they suffer greatly from remaining out of the soil. Hyacinths planted in pots the first of last month, and plunged in the ground, may now be taken up and brought into the parlor to bloom, which will be in about six weeks.

Dahlia roots remaining in the ground should be taken up as soon as possible.

Chrysanthemums, will now be out of flower, and the pots may be removed to the cellar.

Ten-week stocks, now potted, will bloom all winter.

Gilia tricolor: pot small seedlings of this to bloom in the month of February and March.

Minuluses: attend to repotting these for flowering through the season.

Schizanthuses will require attention and repotting where they are growing rapidly.

Gladioluses, izias, sparaxises, and other Cape bulbs, may yet be planted with success.

Ranunculuses, and anemonies, should now be planted in pots where it is desirable to cultivate them in this manner.

Cactuses: keep them moderately dry at this season.

Oxalises may yet be planted with success: some excellent hints on this genus will be found in the present number.

Cumellias will be opening their buds: give such as have already expanded more water.

Trevirana coccinea: keep the plants in a dormant state until February.

Ericas in the green-house should be placed in an airy situation; water more sparingly now than at other times, when they are growing freely.

LIST OF PLANTS.

<i>Acácia armata</i> 157	<i>Antholyza æthiópica</i> 295	<i>póntica</i> 290
<i>dealbata</i>	<i>montána</i> 191	<i>var. álba</i> 290
<i>decurrens</i> 110. 382. 420	<i>præalta</i> 191. 295	<i>lútea</i> 290
<i>falcata</i> 110	<i>Antirrhinum május</i> 167. 366	<i>ne plus ultra</i> 110
<i>longifolia</i> 67. 157. 420	<i>Aquilegia sibérica</i> 255	<i>tricolor</i> 290
<i>lophántha</i> 117	<i>vulgáris</i> 168. 255	<i>thrysiflora</i> 270
<i>péndula</i> 108	<i>Arália spinósa</i> 75	<i>viscosa</i> 16. 326
<i>suavæolens</i> 108. 225	<i>Araucária imbricata</i> 419	<i>Azára dentata</i> 24
<i>spectabile</i> 420	<i>Arbutus Andrachne</i> 65. 220	<i>Babiána</i> 409
<i>undulata</i> 429	<i>canariensis</i> 108	<i>plicata</i> 191
This is probably the <i>A. un-</i>	<i>Unedo</i> 75. 102	<i>rubra cyanea</i> 191
<i>dukefolia Can. Hort. Brit.</i> 24689	<i>Arctostaphylos tomentosa</i> 24	<i>stricta</i> 191
<i>verticillata</i> 420	<i>syn : Arbutus tomentosa</i>	<i>Banksia grandis</i> 110
<i>Acer rubrum</i> 193	<i>Pursh</i>	<i>Bartonia aurea</i> 219
<i>Achillea giberaltica (?)</i> 275	<i>Ardisia crenulata</i> 66	<i>Begonia heracleifolia</i> 105
<i>phœnicea flore pleno</i> 355	<i>Argemone mexicana</i> 396	<i>Befaria</i> 24
366	<i>Aristolochia foetens</i> 176	<i>Bellis integrifolia</i> 142
No such species in <i>Hort Brit.</i> ,	<i>grandiflora</i> 176	<i>syn. Eclipta integrifolia,</i>
but the latter may be the	<i>Serpentaria</i> 221	<i>Spreng.</i>
<i>Ptarmica var. flore pleno, L.</i>	<i>sipho</i> 221	<i>perennis</i> 191
<i>Achras Sapota</i>	<i>trilobata</i> 221	<i>Benthamia fragifera</i> 70
<i>Aconitum albidum</i> 327. 365	<i>Armeniaca</i> 350	<i>Berberis Aquifolium</i> 74
<i>Halleri</i> 327. 365	<i>Arónia Botryapium</i> 15	This is the <i>Mahonia A.</i>
<i>Napellus</i> 327	This must be synonymous	<i>quifolium Pursh</i>
<i>Acroconia</i> 99	with the <i>Amelanchier Botrya-</i>	<i>aristata</i> 75
<i>Adanonia digitata</i>	<i>pium Dec.</i>	<i>sinensis</i> 75
<i>Æsculus rubicunda</i> 299	<i>Artocarpus integrifolia</i> 101	<i>Bétula álba</i> 347
<i>Agapanthus umbellatus</i> 315	<i>Arum discolor</i> 157	<i>Bignonia grandiflora</i> 357
365. 395	<i>Asclepias curassavica</i> 157. 275	380
<i>Agrimonia</i>	<i>tuberosa</i> 315. 327. 355. 395	<i>radicans</i> 365
<i>nepalensis</i> 350	<i>A sin na parviflora</i> 75	<i>Biophytum sensitivum</i> 440
<i>Eupatoria</i> 350	<i>triloba</i> 75	<i>Bléta</i> 65
<i>Ailantus glandulosa</i> 35	<i>Aspidium marginale</i> 354	<i>Briza máxima</i> 273
<i>Allamanda cathartica</i> 379. 392	<i>Aster sibérica</i> 366	<i>Bruzamánsia sanguinea</i> 383
<i>Allium Halleri</i> 190	<i>Nove Anglæ</i> 366	<i>suavæolens</i> 272
<i>Allus serrulata</i> 193. 194	<i>Astragalus aristatus</i> 75	<i>Brunonia australis</i> 223
<i>Aloysia citriodora</i> 292	<i>cancasicus</i> 75	<i>Brunsvigia</i> 191
<i>Alpinia nutans</i> 388	<i>tunidis</i> 75	<i>Bryophyllum calycinum</i> 157
<i>Alstraméria aurantiaca</i> 223	<i>Astrántia mājor</i> 275. 291. 314	<i>Bulbine floribunda</i> 191
275	326	This is the <i>Anthericum flori-</i>
<i>syn. A. aurea Gra.</i>	<i>Astrapsa Wallichii</i> 66. 76. 100	<i>båndum H. K.</i>
<i>Pelegria</i> 275	<i>Averrhoa Bilimbi</i> 443	<i>pugione formis</i> 191
<i>psittacina</i> 275. 276. 314	<i>Carambola</i> 444	<i>Cactus Ackermanni</i> 217
<i>tricolor</i> 275. 276	<i>Aucuba japonica</i> 75	<i>Jenkinsoni</i> 217. 262
<i>syn : Flos Martini Ker.</i>	<i>Azálea</i>	325
<i>Amaryllis</i> 100 sp. and var.	This genus has been united	both <i>syn. of Cereus</i>
<i>enumerated</i> 108. 109	with <i>Rhododendron</i> , but we	<i>Opuntia</i>
<i>Belladonna</i> 379	give, however, the species and	<i>septangularis</i>
<i>falcata</i> 191	varieties here, as noticed in	<i>triangularis</i>
<i>syn. Brunsvigia falcata Ker.</i>	the Magazine.	<i>syn. of Opuntia vulgaris</i>
<i>Johnsónii</i> 464	<i>calendulacea</i> 290	<i>Haw.</i>
<i>venosa</i> 100	<i>indica phœnicea</i> 110	<i>senilis</i>
<i>vittata</i> 179. 236. 262	<i>var. purpurea pleno</i> 470	<i>Calampelis scabra</i> 117. 178
<i>Ananibium alatum</i> 395	<i>ledifolia</i> 65	275. 327. 395
<i>Amygdalus</i> 350	<i>lapónnica</i> 16	<i>Calandrinia grandiflora</i> 315
<i>Andrómæda paniculata</i> 290	<i>nudiflora</i> 16. 255	327
<i>polifolia</i> 15	290	<i>speciosa</i> 341
<i>Anemone hepatica</i> 167	<i>var. álba</i> 16	<i>Calceolaria arachnoida</i> 216
<i>nemorosa</i> 193	<i>carnea</i> 16	<i>corymbosa</i> 106. 214. 216
<i>Angraecum caudatum</i> 261	<i>coccinea</i> 16. 290	<i>var. Talisman</i> 223
<i>Anomatheca cruenta</i> 413	<i>papilionacea</i> 16	<i>Fothergilli</i> 214
<i>junceæ</i> 413	<i>polyandra</i> 16	<i>integrifolia</i> 214. 216
<i>Anthemis nobilis flore pleno</i>	<i>rosea</i> 290	<i>longifolia</i> 269
355. 366	<i>rutelans</i> 16	<i>péndula</i> 216. 275

pinnata	214	j. mutabilis Traversi plen-	Cassia glandulosa	23	
rugosa	214, 216	issima	marylandica	366, 405	
scabiosæfolia	157	j. oxoniensis	Catananche bicolor	406	
Callicoma serratifolia	179	j. pæoniiflora rosea	Cattleya labiata	314	
Calla æthiopica	157, 261	97, 157	Cavendishia	24	
Calliopsis Drummondii	384	j. papaveracea	Ceanothus americanus	17	
bicolor		j. Parks's rose stripe	Celastrus scandens	17	
var. atrosanguinea	143	j. Pomponia	Celostia coccinea	222	
Calotropis procera	25	157	cristata	222	
syn. Asclæpias procera Hort.		j. Pressi	Celsia crética	327, 393	
Kew.		j. Pronayana	Conomyce rangiferina	70	
Caltha palustris	193	j. punctata	Centauræa Cyânus	271	
Camellia japonica	277	j. pulcherrima	Cephalanthus occidentalis	17	
j. alba pleno	18, 79	79, 97	Céræus	350	
117, 157, 311		j. Rosa mundi	capricida	352	
j. alba simplici	18	j. rosæflora	cornuta	352	
j. alba semi-duplex	18	j. rosacea	Puddum	352	
j. acutifolia	67	j. rosea	tomentosa	352	
j. althæiflora	68, 109	j. Rossi	undulata	352	
311, 420		j. rubra plena	Cérbera theveta	392	
j. anemoneflora	20, 157	j. rubra semi-duplex	Céræus grandiflorus	101, 170	
var. alba	99, 95	j. rubricaulis	390, 470		
striata	109	j. sanguinea	flagelliformis	390	
j. atrorubens	92	j. seedling	speciosissimus	252, 276	
j. Augusta	79	j. sericea	splendium	315, 464	
j. Chändleri	79, 94	j. spathulata	triangularis	103	
157, 293, 311		j. speciosa	Vandesia	325	
j. Charles Auguste	79	j. spectabile	Ceropégia elegans	383	
j. Cliveana	64	j. splendens	Chamærops humilis	74, 312	
j. Colla	117	j. Sweeti	Chaptalia tomentosa	31	
j. Colvilli	97, 110, 157	j. variegata	Chelone glabra	366	
j. coccinea	157	300	Lyoni	405	
j. compacta	64	j. venosa	Chenopodium Quinoa	154, 310	
j. concata	109	j. violacea superba	Chironia pedicularis	61	
j. concinna	110, 311	j. Wardi	Chorizema Henchmani	23	
j. conchiflora	117, 157	j. Weimaria	Cimicifuga foetida	315, 327	
j. cordifolia	65	j. Welbanki	Cineraria	67	
This variety is probably sy-		j. Wiltoni	Cinnamomum Camphora	357	
nonymous with some other,		j. Woodsii	Citrus Limonium	98	
and erroneously called by this		Kissi	nobilis	157	
name.		maliflora	117, 157	Clarkia elegans	108, 157
j. corallina	140, 157	syn. Sasiqua plena rubra,	256, 315	pulchella	256
syn. of florida Chand.		reticulata	68, 97, 140	Clématis alpina	355
j. corallina	68, 94	157, 339	157, 339	flammula	355
103		Campanula aggregata	275	florida	366
j. crassinervis	97	alba pleno	315, 326	var. flore pleno	366
j. De Candollei	68	alliaræfolia	366	virginiana	55, 366
j. Donclaeri	293	azarea	326, 355	verticillaris	55
j. Dorsetti	109, 157	carpatica	315, 326	syn. Atragene americana	
j. eclipsis	37, 95, 97	collina	366, 393	Sims	
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103, 157		lactiflora	291, 326	Clethra alnifolia	56, 365
j. Elphinstonii	95	liliiflora	326, 366	Clianthus puniceus	79
j. eximia	23, 37, 93	Lorrèji	315, 326	Clintonia elegans	366
103, 109, 157		mèdium	291, 326	Cobæa scandens	327, 356
j. eximia	37, 93	nitida	326	395	
157		persicæfolia	314	Coccoloba virens	141
This is a syn. of elegans		var. flore pleno	314, 326	Cocos nucifera	99
Chand.		366	366	Coffea arabica	101
j. Fairlea	97	var. flore pleno alba	314	Colchicum autumnale	417
j. fimbriata	21, 311	326, 355, 365	365	418	
j. florida	68	pumila	291	Collinsia bicolor	314
j. francfurtensis	59	pyramidalis	390, 405	Collomia Cavanillesii	260
j. Gilesii	23	sarmatica	326	coccinea	314
j. gloria belgica	68	Trachelium flore pleno	314, 326	syn. of the former.	
j. gloriosa	64	urticæfolia	366	Colutea nepalensis	75
j. Gunnelli	59	Vonsoiiana	366	Combretum purpureum	65
j. Harrisoni	68	Camphorosma monspeliaca	75	262, 379, 392	
j. Henriette (belle)	68	Canna Achiras	348	Commelina cælestis	327
117		glauca	63	tuberosa	327
j. Herberti	68	Carex folliculata	273	Cooperia chlorosplen	224
j. hexangularis	19	hystericina	273	Drummondii	224
j. ignescens	157	lupulina	273	Coptis trifoliata	193
j. imbricata	93, 311	marginata	273	Corcopsis Atkinsoniæna	326
j. Imperatrice du	157	vestita	193	355, 366	
Bresil		Carolineæ princeps	101	syn. of Calliopsis Atkin-	
j. incarnata	19, 117			sóniæna.	
j. insignis	68, 117			Drummondii	143
j. invincible	97			lanceolata	168, 314
j. Linbia	97			326, 355, 366	
j. myrtifolia	21, 117				

<i>tenuifolia</i>	405	<i>Dendrobium macrostachyum</i>	345	<i>heterophylla</i>	416
<i>tripteris</i>	326, 355, 366	<i>dersifflosum</i>	178	a syn. of <i>Poinsettia pulcherrima</i>	<i>Gra.</i>
<i>Coriaria myrtifolia</i>	75	<i>moniliforme</i>	295	<i>Poinsettia</i>	58, 65, 76, 108, 383
<i>Cornus alba</i>	56	<i>Deutzia scabra</i>	70	a syn. of <i>Poinsettia pulcherrima</i>	<i>Gra.</i>
<i>alternifolia</i>	56	<i>Dianella cærulea</i>	100	<i>Euphonia Litchi</i>	101
<i>circinata</i>	56	<i>Dianthus superbus</i>	356, 366	<i>Eutérpe pisiformis</i>	312
<i>florida</i>	57	<i>Dictamnus albus</i>	275, 291	<i>Eutoca multiflora</i>	107
<i>paniculata</i>	57	<i>Diervilla Tourneforti</i>	57	<i>viscida</i>	106
<i>sanguinea</i>	57	<i>Digitaria lutea</i>	314, 327, 366	<i>Ferraria undulata</i>	156
<i>Coronilla viminea</i>	326, 366	<i>purpurea</i>	314	<i>Ficus bengalensis</i>	101
<i>Correa pulchella</i>	65	<i>Dellénia speciosa</i>	100, 383	<i>coriacea</i>	101
<i>speciosa</i>	110, 225, 419	<i>Disa chrysostachya</i>	191	<i>elastica</i>	101, 357
<i>Corylus avellana</i>	113	<i>Doryanthes excelsa</i>	100, 108	<i>indica</i>	387
<i>Corypha umbraculifera</i>	99		420	<i>populnea</i>	101
	312	<i>Dracæna australis</i>	101	<i>religiosa</i>	101
<i>Cosmetia rubra</i>	177	<i>ferrea</i>	101	<i>repens</i>	101
<i>Cotoneaster</i>	350	<i>fragrans</i>	101	<i>Fragaria</i>	350
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<i>Helichrysum bicolor</i>	142	<i>persea</i>	101	<i>Maranta arundinacea</i>	348
<i>Heliotropium europæum</i>	271	<i>syn. of Persea gratissima.</i>		<i>candea</i>	178
<i>Hemerocallis cerulea</i>	353	<i>Gac.</i>		This is probably an error, and should be as follows:	
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<i>rubra</i>	392	<i>tigrinum</i>	366	<i>Melanthus major</i>	117. 157
<i>sinensis</i>	179	<i>Linaria genistifolia</i>	314	<i>Menziesia cerulea</i>	133
should be <i>Rosa sinensis</i> .		<i>Linnaea borealis</i>	276	<i>Mespilus arbutifolia</i>	133
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<i>Holtzia coccinea</i>	100	<i>Liquidamber imberbe</i>	75	<i>Metrosideros floribundis</i>	65
<i>Houstonia cerulea</i>	193	<i>Lobelia cardinalis</i>	356. 365	<i>lanceolata</i>	179
<i>Hoya carnosa</i>	314. 355. 393	<i>bicolor</i>	366	<i>var. semperflorens</i>	99
<i>Hydrangea quercifolia</i>	75	<i>decurrens</i>	222	This should be a species, and not a variety	
<i>Hypericum Kalmianum</i>	326	<i>fulgens</i>	270. 365. 405	<i>semperflorens</i>	382
<i>menogynum</i>	355	<i>gracilis</i>	225	<i>speciosa</i>	179
<i>Hypopythis languinosa</i>	166	<i>longiflora</i>	419	All the above species of	
<i>Hypoxis stellata</i>	156	<i>speciosa</i>	365. 405	<i>Metrosideros</i> , except the first	
<i>Ictodes foetida</i>	193	<i>splendens</i>	270. 365. 405	named, are now united to the	
<i>Ilex Aquifolium</i>	75	<i>syphilitica</i>	222	genus <i>Callistemon</i> .	
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<i>Ipomæa Aitoni</i>	61	<i>syn. of Tapa Fenillei G. Don</i>		<i>luteus</i>	260
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<i>Syn. of Sparaxis tricolor Ker</i>					

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